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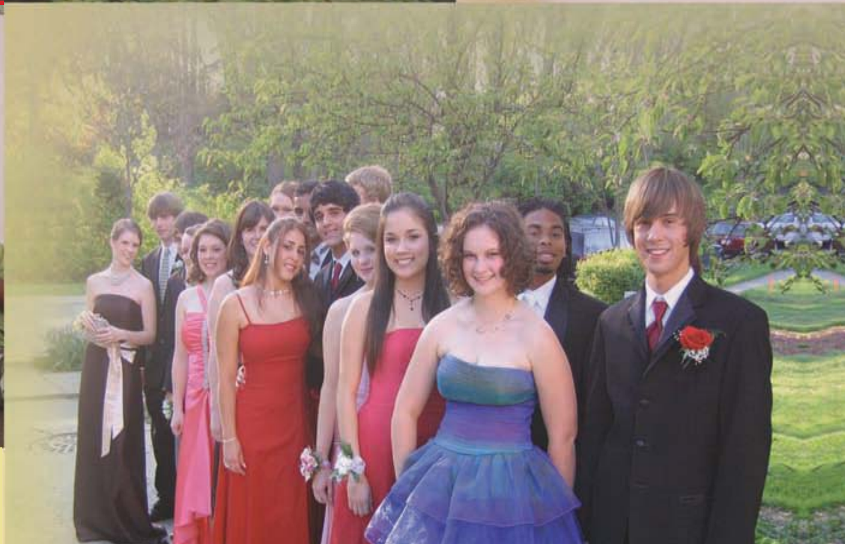
# Encyclopedia of the LIFE COURSE and HUMAN DEVELOPMENT

Volume 1: Childhood and Adolescence



DEBORAH CARR Editor in Chief

*Encyclopedia of the Life Course and Human Development*

# *Encyclopedia of the Life Course and Human Development*

VOLUME 1

## CHILDHOOD AND ADOLESCENCE


***Deborah Carr***

EDITOR IN CHIEF



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**Encyclopedia of the Life Course and Human Development**
**Deborah Carr, Editor in Chief**

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# *Preface*

Why are people so fascinated by their high school reunions? Alumni look forward to reuniting with former classmates for the very same reason that life course scholars do research: *to find out how people's lives turned out*. Life course and human development scholars seek to discover *how* and *why* human lives unfold as they do. Why do some young people succeed in high school, college, and in the workplace while others struggle to earn good grades, find rewarding jobs, and stay out of legal trouble? Why do brothers and sisters from the very same families often follow divergent paths as adults? How do sweeping social changes and historical events—like the Depression era of the 1930s, World War II in the 1940s, the sexual revolution of the 1960s, the stagflation of the 1970s, and the internet explosion in the 2000s—affect the goals, values and opportunities facing each new generation of young people? What factors predict whether old age is marked by physical and cognitive impairment, or vigor and mental acuity?

These are just few examples of the countless questions that life course scholars investigate—but finding answers requires a more systematic investigation than striding up to a former classmate at a high school reunion and asking "what's new?" Life course scholars have developed a sophisticated theoretical paradigm to understand human lives. Four key assumptions guide their selection of research questions, and their ways of thinking about human lives: (a) lives are embedded in and shaped by historical context; (b) the meaning and impact of a life transition is contingent on when it occurs; (c) lives are intertwined through social relationships; and (d) individuals construct their own lives through their choices and actions, yet within the constraints of historical and social circumstances.

Life course scholars also rely on rigorous research methods and data sources—including national censuses, sample surveys, in-depth interviews, and historical records—to document human lives. Because a key question of life course research is "how does historical time and place shape lives?" researchers often compare data obtained at different points in time, from different birth cohorts (i.e., individuals born at different points in history), and from different national and cultural contexts. Researchers also rely heavily on longitudinal data, or data obtained from the same person at multiple points in time, so they can track continuity and change within a single life.

## ABOUT THE ENCYCLOPEDIA

We created the *Encyclopedia of the Life Course and Human Development* to introduce life course theory, research, and methods to seasoned social scientists, graduate students,

undergraduate students taking their very first sociology course, and anyone who has ever wondered "what makes people turn out the way they do?" We hope that this volume conveys our enthusiasm for the creativity, breadth, and both theoretical and practical contributions of life course research.

This project was the brainchild of Barbara Rader, an acquisitions editor with Thomson Gale, who retired shortly after setting the wheels in motion for the encyclopedia. Barbara recognized that the core questions of life course sociology and human development are an essential part of most college-level social science courses, yet there existed no single compendium that brought together the latest research and theory on the life course for a broad audience. I agreed that this encyclopedia was an absolute necessity, and happily signed on as editor-in-chief. I promptly invited three esteemed colleagues to serve as the associate editors for each of the three volumes that comprise the encyclopedia: Robert Crosnoe, University of Texas-Austin (Volume 1, Childhood and Adolescence); Mary Elizabeth Hughes, Johns Hopkins University (Volume 2, Adulthood); and Amy Pienta, University of Michigan (Volume 3, Later Life).

The four-person editorial board then tackled the Herculean task of developing a list of roughly 500 topics to be covered in the encyclopedia. Each board member individually developed their own wish list of topics, and the team then discussed and debated each and every suggestion. Was a topic substantial enough to warrant its own entry? Which classic books were considered sufficiently influential to be included in the annotated bibliography? Which of the hundreds of eminent life course and human development scholars should be celebrated with a biography entry? Should the encyclopedia cover theory and research findings only, or should it also point readers to data sources so that they could conduct their own research? After much deliberation, we narrowed down our list from roughly 1,000 topics to around 450, and invited authors to write the entries. We had two goals in inviting authors. First, we wanted to feature authors who are widely recognized as experts in their field. Second, we wanted to include authors who represented the full range of the professional life course, from outstanding graduate students to eminent emeriti faculty. We are absolutely delighted that such an accomplished group of authors agreed to write for us, and are grateful for the care, creativity, and thoughtfulness that they invested in each and every entry.

Deciding on topics and authors was not the only challenge we faced. The editorial board also thought long and hard about their organizational framework. Should the three volumes reflect separate (yet clearly overlapping and mutually influential) life course stages? Or should it be organized by important life course domains, such as work, family, and health? Or, should there be no organizational framework imposed, and the entries simply run from A to Z? We ultimately decided to divide the encyclopedia into three volumes according to the life course stages that are typically the foci of undergraduate social science courses, such as Adolescent Development, and Sociology of Aging. Yet the debates didn't stop there. In which volume should we place each entry? Some choices were obvious; nearly all of the 34 entries on education-related issues were assigned to Volume 1 (with the exceptions of "Continuing Education," "Educational Attainment," and "Lifelong Learning"). Yet other decisions were less clear-cut. For instance, "Child Custody and Support" describes the impact of custody decisions on children, their adult parents, and their aged grandparents. In the end, we placed entries in the volume that we believed would be the most intuitive "home" for an entry, in the eyes of our readers.

We also questioned whether a topic should be covered in one volume only, or in each of the three. For more than a dozen topics—ranging from parent-child relations to health differentials/disparities to cultural images to genetic influences—we decided that the core research findings, theories and implications were sufficiently distinct for each life course stage as to warrant a unique entry for each volume. Our intellectual deliberations underscore key assumptions of the life course paradigm—life domains are intertwined, the fates of generations are linked, and no single period of life can be understood in isolation from one's

earlier experiences and future aspirations. As readers peruse the encyclopedia, they will become keenly aware of the fuzziness of boundaries demarcating life course stages and domains. However, to help readers easily locate the topics they're seeking, we've provided a thematic outline that classifies individual entries by broad topical subheading and volume number.

Each of the three volumes follows an A-to-Z format that mixes long "composite" (i.e., multi-part) entries on broad topics like aging, childbearing, health behaviors, mental health, and stages of schooling, and short sidebars on up-to-the-minute and controversial topics like "Bankruptcy," "Mommy Wars/Images of Motherhood," "Hurried Child Syndrome," "Third Age," and "Virginity Pledges." Entries range in length from a brief 250 words to more than 7,000 words. Each entry defines key terms, explains why a concept is important for understanding human lives, reviews classic and contemporary works, documents subgroup patterns such as age, race, gender, or cross-national differences, identifies gaps and controversies in research, highlights the implications of life course research for policy and practice, and points to avenues for future study. Most entries are followed by a bibliography, cross-references to related entries, illustrations, and statistical charts and graphs.

Of course, we recognize that we could not cover every possible topic but we hope that the encyclopedia encompasses the topics, theories, scholars, data sources, and research methods that are most central to the study of the life course and human development. We believe that now is the perfect time to unveil this encyclopedia. Ph.D. level social scientists and graduate students have long understood the appeal and importance of adopting a life course approach when studying human lives. In the past decade, nearly a dozen excellent edited volumes and monographs have brought together world-class scholars to synthesize, critique, and extend research and theory on the life course (e.g., Mortimer & Shanahan 2003; Settersten 1999, 2003; Shanahan & Macmillan 2008). For the most part, these sophisticated analyses are targeted toward graduate students and seasoned researchers. However, we know of no other volume that provides a general readership with concise yet cutting-edge statements on nearly 500 topics that represent the range and breadth of life course research.

## A BRIEF OVERVIEW OF THE LIFE COURSE PARADIGM

Upon their initial foray into studying the life course and human development, students sometimes ask the cynical question, "so, is life course sociology the study of *everything*?" Researchers working in the life course tradition *do* study a broad range of topics, ranging from childbearing to criminality, political participation to parenting styles, genetic influences to gender roles. Life course research also incorporates ideas from a broad range of academic disciplines, including biology, economics, epidemiology, genetics, gerontology, history, medicine, psychiatry, psychology, political science, and even statistics. However, scholars working in this tradition approach their work by taking a clear-eyed and highly focused lens on human behavior. The life course paradigm was first articulated by sociologist Glen H. Elder, Jr. (see Elder, 1994 for a review) as an approach to studying human lives that pays equal attention to *individual-level* biographies and *macrosocial* influences.

*Time* is a core component of the life course paradigm, and encompasses both *personal time* (one's own age and aging) as well as *historical time* (historical events and patterns). As such, life course scholars recognize the importance of looking at whole lives in context, rather than isolated stages, such as adolescence (Riley, Johnson, & Foner 1972). The emphasis on *whole lives* or "life trajectories" has its conceptual and methodological roots in the classic *Polish Peasant in Europe and America* study, conducted by W. I. Thomas and Florian Znaniecki (1918–1920). Thomas and Znaniecki studied life histories and also encouraged other researchers to "explore many types of individuals with regard to their experiences in various past periods of life in different situations and follow groups of individuals into the future, getting a continuous record of their experiences as they occur" (Volkart 1951, p. 593). The authors featured in the encyclopedia have heeded this call.

In the following sections, we revisit the four core life course themes mentioned in the opening paragraph of this Introduction, and provide a brief description of the historical roots and contemporary research relevant to each such theme. We hope this brief overview provides readers a foundation for understanding the vast and diverse range of subject matter addressed in this encyclopedia.

**Historical Time and Place** The life course of individuals is embedded in and shaped by the historical times and places they experience over their life time. Think about how your life is different from the lives of your parents, grandparents, or great-grandparents. The choice of one's occupation, plans for when (and whether) to marry and have children, the ability to purchase a home, whether one's schooling is interrupted by war or a family's financial crises, and one's life expectancy are just a few of the many life course experiences that have changed drastically in the past century. The notion that human lives are shaped by social and historical context is a core theme of the life course paradigm, and dates back to the writings of C. Wright Mills. In his classic book *The Sociological Imagination*, Mills (1959) proposed that to understand human behavior, scholars must consider both one's "biography" and "history." Mills noted that "the sociological imagination enables it possessor to understand the larger historical scene in terms of its meaning for the inner life and external career of a variety of individuals" (Mills 1959, p. 7).

The impact of history on individual lives is most evident during periods of rapid social change (Mannheim, 1928/1952). For example, during the latter half of the 20th century, women's social roles changed dramatically, as educational and occupational opportunities expanded in the wake of the Women's Movement. White middle-class women who were stay-at-home mothers in their 1950s witnessed their daughters grow up to have successful careers as lawyers, bankers, doctors, and other careers that historically were considered "men's" domain. Although mothers and daughters share many similarities, including genetic background, ethnicity, religion, and (often) social class, historical changes created a seismic divide in the life choices made by these two generations of women (Carr, 2004).

The impact of history also operates in very different ways, based on one's age when a major *historical trend* unfolds. Young people who were in elementary school when the internet explosion occurred can't remember life before e-mail, and are technologically-savvy computer whizzes. Older adults, by contrast, often struggled to become comfortable surfing the net, emailing, and text messaging. The effects of *specific historical events* also vary based on one's age when the event occurred. Research by Elder and colleagues showed that World War II had vastly different impacts on soldiers, based on their age during the war years. Young entrants had no family or work responsibilities when they shipped off to Japan or Europe, yet older soldiers were abandoning jobs and marriages when they headed overseas. While the young soldiers returned home to new adventures in work, family, and education (due in part to the educational benefits provided by the G.I. Bill), the older soldiers often came home to find their marriages were strained, or their former jobs were no longer available (see MacLean & Elder 2007 for a review). Throughout the encyclopedia, authors highlight the many ways that history shapes individual lives—through processes like economic restructuring and the loss of manufacturing jobs, the 1960s Civil Rights movement that expanded opportunities for ethnic and racial minorities in the United States, and technological and medical advances that enable older adults to live longer and healthier lives than ever before.

*Place* also affects how individual lives unfold. "Place" can be defined as broadly as one's nation, or as narrowly as one's neighborhood or city block. Nation-level characteristics, such its the level of economic development or "modernization" can profoundly influence its citizens' attitudes, values, gender roles, childbearing behavior, educational opportunities and even personality (Inkeles & Levinson, 1969). One's local social context also matters. Neighborhood characteristics like "social capital" or the social cohesiveness and integration of a city block (Coleman 1990), and "social disorganization" or the level of instability, poverty, and crime in one's neighborhood (Shaw & McKay 1942) can affect residents' educational prospects, physical and mental health, occupational opportunities, and even

one's life span. Place also exposes individuals to potentially life-altering public policies. For example, persons living in nations with restrictive population policies, like China's one-child policy, have little choice over their childbearing. Encyclopedia entries take special care to highlight the ways that life course trajectories differ across neighborhoods, states, nations, and even continents. Although geography is hardly "destiny" it does play an important role in shaping life trajectories.

**Timing in Lives** The developmental impact of a succession of life transitions or events is contingent on when they occur in a person's life. How might your life have turned out if you married at age 16? Or if you waited until age 35 to wed? If you married at age 16, you might not have completed high school and might have gone on to have many children, or to hold a poorly paying job that did not require a high school diploma. If you marry for the first time at age 35, you probably have already completed your education, perhaps earning a graduate degree, and having spent many years in the paid work force prior to marrying. Yet marrying at age 35 may mean that one will have only one or two children, given that the likelihood of conceiving a child declines steadily for women after age 35.

These examples illustrate the importance of "social timing." Social timing refers to the ways that age shapes whether, when, how, and to what end one experiences important social roles and transitions between roles. The timing of life transitions reflects a broad range of biological, social, and political forces. For example, the age at which one can physically bear a child is contingent upon the *biological transition* to menarche (that is, a girl's first menstrual period). *Social norms* also provide guidelines for the "appropriate" time for making transitions. Life course sociologist Bernice Neugarten (1965) has observed that people are expected to comply with a "social clock." This refers to "age norms and age expectations [that] operate as prods and brakes upon behavior, in some instances hastening behavior and in some instances delaying it" (Neugarten et al. 1965, p. 710).

Neugarten and her colleagues conducted surveys that reveal Americans generally agree that there is a "right" age to marry, start a job, and find one's own home (Neugarten & Datan 1973). Norms dictating the "right" age for life transitions change over historical time, however. For example, marrying at age 19 and having one's first child at 20 was normal and even desirable for women, in the late 1950s. By contrast, few college students today (or their parents!) would endorse marrying at such a young age.

Popular culture reinforces the belief that there is a "best" time to make important life transitions. Recent Hollywood films like *Failure to Launch* and *Stepbrothers* are an obvious indicator that Americans believe that life transitions that occur "off-time" or later than is typical, are a sign of poor adjustment. Both films depict men in their late 30s who still live with their parents, and who are portrayed as incompetent. Similarly, the 30-something women portrayed in the hit television show *Sex & the City* bemoaned the fact that they were single, and often were made to feel like failures by their married peers. They also worried that they might not be able to have biological children, if they waited until their 40s to marry. These cultural messages carry another important theme of life course research: "mistimed" transitions—or transitions that occur earlier or later than one's peers often create psychological stress, difficult challenges, and social disapproval.

Although cultural norms *informally prescribe* the appropriate timing of life course transitions, public policies *mandate* the timing of many important transitions. Although state laws vary, the law typically dictates that children must stay in school until age 16, and that young people cannot marry until they are 18 years old unless they obtain parental permission. Likewise, the age that one can vote, drive, drink legally, serve in the military, retire with full Social Security benefits, or become President of the United States is dictated by federal or state law. Laws, like social norms, also change over historical time. While young children labored on farms and in factories in past centuries, child labor was banned in the United States by the Fair Labor Act of 1938, and strict rules now dictate the age at which children can work for pay.

Life course scholars recognize that legal, biological, and social time tables may be out of sync, which may cause difficulties as individuals negotiate their life choices. For instance, boys and girls may be physically able to bear a child at age 13, yet they may not be emotionally prepared to enter the role of parent. Public polices encourage (and in some cases, mandate) workers to retire at age 65, although many older employees are perfectly healthy and willing to remain in the work force for another decade. Married couples may not feel "financially ready" to have a child until both have their careers and finances in place, yet if they delay childbearing too long, it may become biologically unfeasible.

The concept of timing weaves through many entries in this encyclopedia. Entries on important life transitions such as marriage, childbearing, school-to-work transition, home ownership, relocation, widowhood, mortality, and retirement reveal the ways that the timing of such events is shaped by one's past, yet also sets the foundation for one's future. Many entries also show that the timing of events varies not only by one's birth cohort, but by factors such as race, ethnicity, nativity status, and social class. In doing so, the encyclopedia authors reveal the importance of heterogeneity in the life course.

**Linked Lives** Lives are lived interdependently, and social and historical influences are expressed through this network of shared relationships. The third theme of the life course paradigm is the notion of "linked lives." "Linked lives" refers to the way that each individual's life is embedded in a large network of social relationships—with parents, children, siblings, friends, coworkers, in-laws, romantic partners, and others. The notion that social relationships matter dates back to Émile Durkheim's (1997 [1897]) classic writings on social integration. Durkheim famously found that persons with tight-knit social networks had lower rates of suicide than those with weaker social ties. Married persons had lower suicide rates than the unmarried, Catholics fared better than Protestants, and parents revealed lower suicide rates than the childless. Since the publication of Durkheim's work, social scientists have sought to uncover why and how social relationships affect the life course.

Authors in the encyclopedia explore a wide variety of types of social relationships and document patterns such as the impact of parent-child relationships on child outcomes, how peer relationships among school-age persons affect psychological and educational success, and the ways that older persons' health is protected by spouses, friends, siblings, and significant others. The protective effects of social relationships even extent to studies of crime and deviance over the life course. For example, John Laub and Robert Sampson (2006) found that social relationships, especially marrying, having children, and securing a job, were considered the key pathways out of deviant careers for young men whose early years were spent in reform school.

The concept of linked lives also refers to the ways that *generations* are linked to one another. A core theme of life course research is intergenerational transmission; parents' transmit their values, attitudes, and even their socioeconomic achievements and intellectual resources to their offspring (e.g., Sewell & Hauser 1975; Baumrind 1987; Furstenberg, Brooks-Gunn, & Morgan 1987). Parents socialize their children, and thus teach their children how to become well-adjusted members of society. Although classic studies of socialization revealed the ways that children became like their parents, researchers also have focused on identifying why and how children turn out differently from their parents—often placing emphasis on the many other social relationships and social contexts that a child experiences. For example, James Coleman's (1961) classic study *Adolescent Society* shows how high schools students socialize their peers to hold values that are in opposition to the values held by their parents.

Life course sociologists also recognize that *life domains* are linked. Even within a single individual, work and family choices affect one another; working full-time may preclude one from being a stay-at-home parent, or intensive parenting demands may prevent one from working as many hours as one would like. Likewise, economic standing and physical health are mutually influential; poverty exposes people to health risks such as poor nutrition, yet poor health compromises one's ability to work full-time. Moreover, life course influences can occur

both cross-person and cross-domain. A spouse's work strain may affect one's own psychological health, while a parent's job loss (and loss of health insurance). may affect a child's health.

The classic example of cross-generation, cross-domain linkages is Elder's (1974) *Children of the Great Depression* study. He found that when fathers lost their job during the Great Depression, mothers and young sons were forced to seek work and earn money, while young daughters often did household chores that would have otherwise fallen to the mother. Thus, the imbalance of power between mother and father weakened the father's ability to exert control, and shaped the children's gender role views. The family's income loss also created marital strain between the parents, and compromised their ability to supervise their children. Elder reveals the cascading consequences of this economic strain across generations and across domains. The complex interplay among generations, social relationships, and life domains is evident in nearly every encyclopedia entry and underscores the key life course theme that lives are embedded in rich networks of roles and relationships.

**Agency** Individuals construct their own life course through their choices and actions, within the opportunities and constraints of historical and social circumstances. Thus far, we have highlighted the ways that forces external to the individual, like history, birth cohort, wars, and one's social relationships shape individual biographies. Yet personal agency—or one's choices, aspirations, ambitions, and attitudes—also shape the life course. Whereas classic sociological research and theory has traditionally emphasized the ways that social structures constrain (or benefit) individuals, the life course paradigm views human behavior as a reflection of *both personal agency and structural constraint.* Individuals select social roles and opportunities that are consistent with their own personal preferences, traits, resources, and even genetic predispositions (e.g., Scarr & McCartney 1983)—yet freedom of choice is not distributed evenly throughout the population. Persons with fewer economic resources have fewer opportunities to seek out and pursue desirable options, while characteristics such as age, race, gender, physical ability status, sexual orientation and religion may create obstacles for some individuals—at least at certain points in history.

A compelling example of the ways that agency and structure influence life course trajectories can be found in John Clausen's (1993) book *American Lives*. Clausen tracked a cohort of men and women who were born in the early 20th century, and followed their lives for more than 60 years. He found that an important cluster of traits— "planful competence" — was a powerful predictor of successful careers and marriages, and good health more than five decades after the adolescents had graduated high school. "Planful competence," according to Clausen, encompasses self-confidence, intellectual investment, and dependability. These attributes, in turn, were associated with better academic performance in school, well-thought out plans for post-secondary schooling, and focus when selecting one's career. Clearly, planful competence encompasses one's own ambition, aspirations for the future, and conscientiousness in pursuing one's goals. At the same time, however, children from more advantaged social and economic backgrounds were more likely than their less well-off peers to enjoy high levels of competence.

Many encyclopedia entries offer compelling descriptions of the ways that psychological traits, like age identity, personality, self-esteem, and even body image, shape one's future orientations and accomplishments, yet also reflect the resources and relationships one has enjoyed in the past. Psychological factors like agency do not only exert *direct* effects on life chances, they also may *buffer against* the negative effects of early adversity, or exacerbate the difficulties that accompany critical life stressors. The interplay between the social and the psychological, micro- and macro-level phenomena, and biography and history, make up the foundation of life course research and scholarship. The entries to follow reveal the vitality and nuance that characterizes this field of study today.

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# *Introduction to Volume 1, Childhood and Adolescence*

Although childhood and adolescence are familiar concepts, they are deceptively ambiguous. Each of these two stages of the life course can be internally divided into qualitatively different substages. Moreover, the boundaries of each stage are notoriously fuzzy. Two and half centuries ago, for example, childhood was a very short period of life, and the term "adolescence" was not even coined until the turn of the 20th century (by G. Stanley Hall in 1904). Today, the outer edge of adolescence is drifting upward, as powerful macro-level forces (e.g., economic globalization, declining mortality rates) have added a period of "adultolescence" to what has traditionally been thought to constitute the early life course (Settersten, Furstenberg, & Rumbaut 2005).

When designing this encyclopedia, the other editors and I were occasionally confused about whether many entries should go into Volume 1 or 2 and over whether other entries were primarily about children or their parents. For the sake of clarity, it was decided that childhood and adolescence involve the portions of the life course between conception and the early 20s and the experiences that young people have during this time as well as what happens to or directly affects them. This is about as precise as one can be with life stages that tend to be a little slippery across time and place. Whatever the exact definitions are, the importance of this volume lies in the *foundational* role of childhood and adolescence in the life course. By foundational, I mean that what happens during childhood and adolescence sets the stage for adulthood and beyond—when positive and negative trajectories begin that carry individuals through life, when experiences happen that can be built on or torn down by later experiences. As such, the entries included in Volumes 2 and 3 are prefaced by the entries in this volume.

To illustrate this foundational role of childhood and adolescence, consider work from two leading social scientists who study the early life course. First, the Nobel Prize-winning economist James Heckman has advocated an early action strategy for public policy by documenting how public investments in pre-school have bigger long-term returns than investments in later stages of schooling precisely because young children are more malleable and because initial experiences serve as building blocks for the rest of life. This idea has become a guiding force in policy intervention, such as universal pre-Kindergarten programs in several states that guarantee publicly funded pre-school education for all children as a means of reducing demographic disparities in school readiness (see the child care/early education entry by Gordon in this volume). Second, Glen H. Elder, Jr.—perhaps the most important architect of the life course perspective—began his career tracing the life

trajectories of children growing up in historical eras of economic hardship, such as the Great Depression of the 1930s. The early experiences of these children left an imprint on their lives. Some never overcame their initial hardship. Most, however, were resilient because later experiences (in school, in the armed forces) provided turning points that counterbalanced these early hardships.

The pioneering work of Heckman, Elder, and others demonstrates the need to view what happens in childhood and adolescence as part of a larger sequence of inter-related events, experiences, and roles, as links in the same chain. Given that this volume mixes entries on macro-level and micro-level phenomena, the life course approach to understanding childhood and adolescence can be seen on the macro-level of the population (e.g., the evolving society) and on the micro-level of the individual (e.g., the developing person).

## CHILDHOOD AND ADOLESCENCE IN POPULATION PERSPECTIVE

The size of the United States school population is at an all-time high (U.S. Census 2008). This milestone is but one manifestation of the incredible growth of the child/adolescent population in the United States and in many other parts of the world, which is just one trend driving home the point that the size and composition of the youth cohort can change dramatically over time with great consequences for society at large.

This growth in the youth population of the United States is a result of many things. Most importantly, it represents a natural progression of the Baby Boom generation—a succession of large birth cohorts from 1945–1965—entering their prime childbearing years. What has also had an impact is the uptick in immigration after the reform of U.S. immigration laws in the 1960s (see “Immigration, Childhood and Adolescence” by Galindo & Durham). By lifting national origin quotas for immigrants, these laws set into motion another population trend pertinent to understanding childhood and adolescence today. Specifically, the growing predominance of Latin American and Asian countries in the “sending” stream, coupled with differential fertility rates across race/ethnic groups, has fueled the increasing heterogeneity of American youth. When I was born in the early 1970s, for example, 4 of 5 youth in the United States were non-Hispanic white. Now, just over half are.

Two other population trends also warrant discussion. The first is that, because of dramatic increases in divorce, cohabitation, and non-marital fertility throughout the late 20th century, only a minority of American youth grow up in homes with continuously married parents, the family arrangement most probabilistically related to optimal child outcomes. This trend, in turn, varies considerably by race/ethnicity and social class (see “Family and Household Structure, Childhood and Adolescence” by Cavanagh). The second trend is that, although concepts of equal opportunity and social mobility are ingrained in American culture, socioeconomic inequality is at its highest point in modern history. For the most part, this stratification has occurred because gains in income and wealth have primarily been concentrated in the upper tail of the socioeconomic distribution. Since the oldest of today’s youth cohort was being born in the 1980s, the fortunes of the upper and middle class have diverged while those of the middle and lower class have converged (Fischer and Hout 2006).

These population trends have varied in other parts of the world. Europe and Japan have low fertility rates, which means smaller youth cohorts, but this is not the case in Africa or Latin America. As a historically diverse society and major immigration destination, the United States has a more heterogeneous youth population than many nations. Moreover, because the United States lacks a large social safety net relative to other Western countries, inequalities here may be more problematic than in other countries. Still, although it is not always representative, the United States provides a clear case of how the demography of the youth population can be shape the future of a society.

To see how demographic trends link the present to the future, consider crime, education, and marriage/fertility. First, the years when one is most likely to commit crime are in late adolescence and young adulthood (see "Crime, Criminal Activity in Childhood and Adolescence" by Macmillan). As a result, societies often experience crime surges when the number of adolescents and young adults is large, a pattern suggesting that an upswing in crime is to be expected. Second, the large number of students in the education system means bigger schools and greater competition for courses, grades, and college slots. This trend is likely to fuel socioeconomic disparities in educational attainment at a time when economic restructuring is prioritizing technological innovation and, in turn, penalizing societies for not pushing the best candidates into the right positions (Fischer and Hout 2006). Third, the increasing race/ethnic diversity of today's youth cohort means that they will experience a more diverse marriage market, with increased opportunities to meet and interact with members of other groups meaning that interracial marriage rates could be headed upward (see "Transition to Marriage" by Sweeney). From a policy perspective, these examples of how the demography of today's child/adolescent population is linked to the future of American society suggests a need to foresee consequences of demographic change and craft policies accordingly, such as building schools, hiring teachers, and increasing college capacity. This strategy seems self-evident, but, as the current Social Security crisis illustrates, it is one not often employed.

## CHILDHOOD AND ADOLESCENCE IN DEVELOPMENTAL PERSPECTIVE

Together, childhood and adolescence represent the period of most rapid change in the entire life course. Just think about how different a newborn is from a 20 year old—how they look, what they do, how they think and feel, what their worlds include. How this change unfolds—and on what schedule—results in a basic "package" of a person, in terms of appearance, personality, and skills that they will carry forward into the rest of life, that can be modified and altered in various ways but is rarely fundamentally reconstitued (Furstenberg 2000).

Consider physical, neurological, and psychosocial development. Over the course of childhood and adolescence, young people gain weight and height at often exponential rates, and their bodies gradually evolve in form to fit the functions they need to perform. This physical change is clearly encapsulated in puberty. Puberty is not a discrete event, but rather a transitional period that links childhood to adolescence. A *biological* process, it has *social* meaning, and is viewed as the dividing line between young and old (see "Puberty" by Cavanagh). Brain scanning has shed valuable light on neurological development, by, for example, mapping out the explosion of brain growth that occurs in early childhood and the ultimate pruning of neurological pathways as childhood progresses. Such scanning has also documented how the different rates of development in parts of the brain regulating social and emotional maturity from those regulating critical thinking and impuslivity over the course of adoelscence provide a biological explanation for the risk-taking and defiance that often occurs during the high school years (Steinberg 2008). Turning to other psychosocial trajectories, as young people move through the various substages of childhood and adolescence, they gradually gain the ability to take others' perspectives, self reflect, and and connect action to consequence. At the same time, their relationship systems expand from dyadic interactions to diffuse interpersonal networks, and they try on multiple identities before gradually integrating the different pieces of the self (Hartup and Stevens 1997). In turn, all of this physical, neurological, and psychosocial development occurs as young people move through a series of institutional structures, including early child care, school, and the health care system, in which the take on new roles, gain credentials, and learn about their place in the larger society.

To borrow images from the life course perspective, then, the life course is a tapestry of developmental trajectories, convoys of social relations, and institutional pathways. We can see why the structure and timing of this tapestry in childhood and adolescence is

consequential for the future by considering crime, education, and marriage/fertility. First, the increase in impulsivity and susceptibility to peer influence that occurs in adolescence, which comes about because of both neurological and psychosocial changes, explains why rates of crime and sexual risk-taking rise during this period and fade thereafter. Because of the cumulative nature of the educational system, however, this rite of passage can have long-term consequences even after this period is over—when psychosocial maturity has caught up to physical maturity, and individuation from parents is complete. These long-term consequences can occur if what happens during adolescence throws off trajectories through school in some way that cannot be easily undone (see "Academic Achievement" by Grodsky). As examples, getting arrested can foreclose many future work and schooling opportunities, substance use can lower chances of going to college at a time when a college education is especially important to one's future, and an unplanned pregnancy can lead to truncated educational attainment and early marriage or cohabitation. Because adolescence is not isolated from the rest of life, the consequences of what happens during adolescence are not necessarily confined to those years. The same goes for childhood.

From a policy perspective, the intertwined nature of developmental trajectories, social convoys, and institutional pathways in childhood and adolescence means that efforts to target any one must be grounded in a holistic view of the person and with an eye towards long-term consequences. As with the discussion of the population level, this approach seems self-evident. Consider Eccles' work on the disconnect between the structure of middle schools in the United States and the developmental needs of early adolescence and the implications of this disconnect for healthy development and educational attainment long after the end of middle school. A reading of this work reveals how an understanding of the developmental processese of childhood and adolescence is not incorporated into the structure and organization of institutions serving developing children and adolescents.

## PUTTING THE PIECES TOGETHER

The role of childhood and adolescence in the life course on the population level is inextricably tied to its same role on the developmental level. Popualtions, after all, are aggregates of developing individuals, and what goes on in a population is a setting of individual development. This interplay between the macro- and micro-levels is what the concept of the life course is all about—the intersection of societal history and personal biography (Mills 1959).

The biography metaphor is a good one for understanding childhood and adolescence. If the life course is a biography on a book store shelf, childhood and adolescence are the opening chapters. By the end of the book, the memory of those early chapters may have faded, but the reader cannot understand how the book ends if he or she skips Chapters 1 and 2.

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DATA SOURCES, CHILDHOOD AND ADOLESCENCE: EARLY CHILDHOOD LONGITUDINAL STUDIES
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DATA SOURCES, LATER LIFE: HEALTH AND RETIREMENT STUDY (HRS)

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HURRIED CHILD SYNDROME

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BIRACIAL/MIXED RACE ADULTS

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COLEMAN, JAMES

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DATA SOURCES, LATER LIFE: WISCONSIN LONGITUDINAL STUDY

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TIME USE, ADULTHOOD
TIME USE, LATER LIFE

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# *Thematic Outline*

*The following classification of articles arranged thematically gives an overview of the variety of entries and the breadth of subjects treated in the encyclopedia. Along with the index and the arrangement of the encyclopedia, the thematic outline should aid in the location of topics. It is our hope that it will do more, that it will direct the reader to articles that may not have been the object of a search, that it will facilitate a kind of browsing that invites the reader to discover new articles, new topics, related, perhaps tangentially, to those originally sought.*

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2. Biological Influences
3. Core Concepts
4. Crime and Deviance
5. Culture
6. Data Resources
7. Economics
8. Education
9. Employment
10. Family
11. Fertility
12. Gender
13. Health Behaviors
14. Health Care
15. Housing
16. Inequality
17. Mental Health
18. Mortality
19. Neighborhoods
20. Physical Health
21. Policies
22. Population Trends and Issues
23. Psychological Processes
24. Race and Ethnicity
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27. Sex and Sexuality
28. Social Relationships
29. Social Roles and Behaviors
30. Technology
31. Theory
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**1. BIOGRAPHIES**

**VOLUME 1**

Bandura, Albert
Bowlby, John
Bronfenbrenner, Urie
Clausen, John
Coleman, James
Elder, Glen H., Jr.
Erikson, Erik
Freud, Sigmund
Mead, Margaret
Piaget, Jean
Thomas, W. I.

**VOLUME 2**

Durkheim, Èmile
Giddens, Anthony
Mannheim, Karl
Marx, Karl
Mills, C. Wright
Simmel, Georg
Znaniecki, Florian

**VOLUME 3**

Baltes, Margret and Paul
Bengtson, Vern
Foner, Anne
Lopata, Helena
Mayer, Karl Ulrich
Moen, Phyllis
Neugarten, Bernice
Riley, Matilda White
Rossi, Alice
Ryder, Norman
Shanas, Ethel

**2. BIOLOGICAL INFLUENCES**

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Genetic Influences, Early Life
Puberty

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Attractiveness, Physical
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Individuation/Standardization Debate
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Data Sources, Childhood and Adolescence: Baltimore Study
Data Sources, Childhood and Adolescence: Bennington Women's Study
Data Sources, Childhood and Adolescence: Berkeley Guidance Study and the Oakland Growth Study
Data Sources, Childhood and Adolescence: Early Childhood Longitudinal Studies
Data Sources, Childhood and Adolescence: National Educational Longitudinal Study
Data Sources, Childhood and Adolescence: National Longitudinal Study of Adolescent Health
Data Sources, Childhood and Adolescence: National Longitudinal Survey of Youth
Data Sources, Childhood and Adolescence: Stanford-Terman Study

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Data Sources, Adulthood: General Issues
Data Sources, Adulthood: Americans' Changing Lives (ACL)
Data Sources, Adulthood: Current Population Study (CPS)
Data Sources, Adulthood: General Social Survey (GSS)
Data Sources, Adulthood: Longitudinal Study of Generations (LSOG)
Data Sources, Adulthood: Midlife in the United States (MIDUS)
Data Sources, Adulthood: National Longitudinal Surveys of Mature Men and Women
Data Sources, Adulthood: Panel Study of Income Dynamics (PSID)
Data Sources, Adulthood: U.S. (Decennial) Census

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Data Sources, Later Life: Berlin Aging Study (BASE)
Data Sources, Later Life: English Longitudinal Study of Ageing (ELSA)
Data Sources, Later Life: Health and Retirement Study (HRS)
Data Sources, Later Life: Longitudinal Study of Aging (LSOA)
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Home Schooling
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Mentoring
Moral Development and Education
Parental Involvement in Education
Private Schools
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Stages of Schooling: Overview and Introduction
Stages of Schooling: Elementary School
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# A

## ACADEMIC ACHIEVEMENT

The primary function of primary and most secondary schools in the United States is to imbue students with core competencies in the academic subjects, including English, mathematics, science, history, and social studies. Achievement refers to students' demonstrated command over these subjects and can be measured in a variety of ways. Although related to both cognitive ability and learning, academic achievement is distinct from each. Learning refers to a change in academic achievement whereas cognitive ability may contribute to the capacity of students to learn or their pace of learning. Achievement, in contrast, captures the knowledge or skills that students possess at a single point in time. Students' academic achievement has direct and indirect effects on their educational and occupational opportunities, physical and mental health, and general well-being over the life course.

### MAIN THEMES AND THEORIES IN RESEARCH ON ACADEMIC ACHIEVEMENT

Sociologists have drawn on four major bodies of theoretical knowledge to guide their investigations of the determinants and outcomes of academic achievement: status attainment theory, reproduction and resistance theories, organizational theory, and human capital. In this section, each of these theories is reviewed briefly.

**Status Attainment** According to the status attainment model, academic achievement is a critical pathway through which social origins (or the social class of one's parents) affect one's own occupational achievements. This model originally measured occupational and educational attainment as a function of parental education and occupation alone (Blau & Duncan, 1967). William Sewell, Archibald Haller, and Alejandro Portes (1969) changed the model by adding measures of cognitive skills, academic achievement, and social psychological measures. They found that academic achievement in high school is significantly affected by cognitive skills but not of cognitive skills, independent of socioeconomic origins. Sewell et al. also showed that academic performance is a key predictor of educational and occupational outcomes. One avenue through which academic performance affects outcomes is through its effect on students' own educational and occupational aspirations as well as the aspirations their parents and teachers hold for them.

**Reproduction and Resistance** Critics of the status attainment model contend that it ignores structural barriers, such as discrimination, tracking, or variation in school quality, across groups that block even ambitious and academically able students from achieving in school. Whereas reproduction and resistance theorists, like status attainment researchers, view academic achievement as a key factor in explaining the relationship between social origins and destinations, they contend that academic achievement serves only as a means of reinforcing preexisting social distinctions among children. In one variant of reproduction theory, Pierre Bourdieu (1930–2002) described how students and parents from elite social backgrounds draw on their *cultural capital* to help them navigate the educational process. According to Bourdieu,

schools and teachers validate the cultural capital of middle- and upper-class students both formally (through grades) and informally (through their daily interactions), whereas denigrating the cultural capital of working-class students. In contrast to Sewell, empirical work in this tradition suggests that student cultural capital, as measured by involvement in art, music, and literature, has a significant effect on high school grades, independent of social background and ability (DiMaggio, 1982).

Taking a more Marxian approach to social reproduction, Samuel Bowles and Herbert Gintis (2002) described how schools mirror the labor force in structure, stratification, and the social characteristics or personality traits it rewards. According to Bowles and Gintis, teachers nurture critical thinking skills in their middle- and upper-class students while rewarding punctuality and conformity in their working-class students. Thus grades reflect academic achievement in part but also reflect the adoption of class-appropriate personality attributes. Although these assertions regarding the importance of noncognitive over cognitive skills in the workplace enjoy substantial empirical support, research on the relationship between social class origins and grades fails to support the contention that teachers differentially reward their students based on class-appropriate personality characteristics (Olneck & Bills, 1980).

Some critics of reproduction theories argue that these theories overlook the degree to which working-class and poor students work to subvert the educational system. For example, Paul Willis (1977) showed how working-class boys in Britain resist engaging in mental labor in favor of manual labor as the latter "carries with it—though not intrinsically—the aura of the real adult world" (p. 103). According to Willis, the boys in his study made "partial penetrations" into the stratification system, rightly seeing academic achievement as a means of legitimating the social class hierarchy but failing to understand their own roles in perpetuating that system. Likewise, Giroux (1983) argued that working-class subordination through schooling is part of the process of self-formation within the working class itself.

**Organizations of Schools** The sociology of organizational theory views academic achievement as heavily influenced by the technology of instruction and structure of the school organization. These two perspectives come together to inform the substantial research on tracking and ability grouping in education. In the primary school grades, Rebecca Barr and Robert Dreeben (1983) found few differences in academic aptitude across classrooms but substantial differences in aptitude across reading groups within classrooms. Teachers teach to the mean of each ability group, and, as a result, academic achievement increases more sharply for some reading groups than it does for others. This observation, which is borne out across middle and high schools as well, led Alan Kerckhoff and Elizabeth Glennie (1999) to characterize the relationship between initial academic achievement and learning as the *Matthew effect*, whereby academic advantage and disadvantage are compounded over time. The Matthew effect tends to reinforce the relationship between social origins and academic achievement, as children of less educated and less affluent parents, as well as Latino and African American children, are more likely to be enrolled in lower-track classes than their more advantaged peers (Gamoran & Mare, 1989).

**Human Capital** Like the status attainment and reproduction theories, human capital theories view academic achievement as both an outcome of social origins and a determinant of an individual's occupational outcomes. Human capital can be defined as knowledge and skills that contribute to worker productivity and thus increase earnings and wealth. Parents invest in their children's human capital and that investment generally boosts the child's academic achievement. Research shows that these investments are neither random nor equally distributed among children, however. Parental investment is a function of their number of children, the child's apparent cognitive endowment, and the child's luck (Becker & Tomes, 1976).

Human capital theory also shows how achievement in school is related to occupational outcomes. Achievement in kindergarten through high school contributes to general human capital—that is, any basic knowledge and skills that can be used to excel in an occupation. Achievement in secondary school and beyond that begins to be tailored to an individual's specific occupational interests may pay off even more.

## COMMON INDICATORS OF ACHIEVEMENT AND HOW THEY ARE USED

Like other unobserved characteristics, such as attitudes, cognitive ability, and self-esteem, measuring academic achievement is a challenge to educators and researchers alike. Academic achievement may be assessed at any point in the learning process. Teachers often measure academic achievement early in the semester to help guide their instructional practice. Several times over the course of the term they will monitor learning, or change in achievement (formative assessment), and at the end of the term they evaluate student mastery (summative assessment). School districts and states compel schools to assess students for accountability purposes, whereas colleges, universities, and graduate schools assess potential students prior to offering them admission. Assessment instruments vary widely depending on the education system, the subject, and the type of skill or knowledge to be assessed.

**Indicators** The most commonly used type of assessment for comparative purposes is the standardized assessment. Standardized assessments consist of a uniform prompt given to all examinees in a uniform setting. Standardized exams may consist of multiple-choice, short-answer, and essay questions. Standardized assessments seek to systematically eliminate sources of variation in assessment performance outside of student achievement (including the influence of teachers or examiners, the use of notes or readings, parent intervention, and so forth). Although multiple choice questions are the most common and least costly questions used in standardized assessments, constructed response items (such as the writing section of the scholastic aptitude test [SAT]) are also common. There are many alternatives to standardized assessment. For example, in portfolio assessment, evaluators review a collection of each student's work, or portfolio. Performance assessments measure student achievement by requiring the student to execute or complete a specific task or process that directly reflects his or her academic achievement. An example of this might be asking students to complete a lab experiment in a chemistry or physics course. Portfolio and performance assessments grew in popularity in the early 1990s when some states required that students be evaluated with alternative forms of assessment. Although potentially effective, the time-intensive nature of grading these assessments may be impractical for large classes.

**How Indicators Are Used** Measures of academic achievement are used for a number of different purposes in American education. Within classrooms, teachers measure academic achievement to monitor student learning, tailor instruction to student needs, and (in primary schools) assign students to ability groups, primarily in reading. Teachers and counselors rely on measures of academic achievement (including standardized test scores, grades, and teacher judgments) to assign students to academic classes that vary in their content coverage and pace or to targeted instructional programs, including classes for English-language learners, remedial classes, and classes for gifted and talented students.

Schools rely increasingly on high-stakes tests to make grade retention and promotion decisions at the primary school level and to award high school diplomas to those who have satisfied other requirements for high school

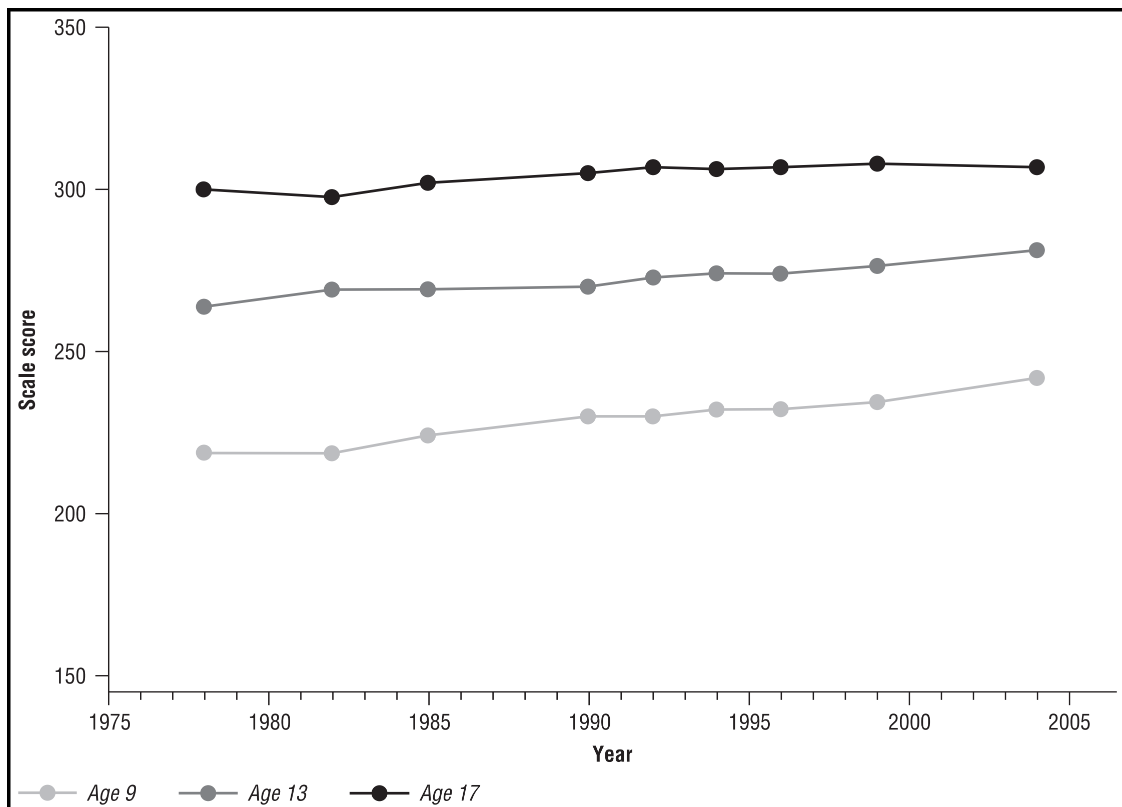


***Figure 1.*** *This NAEP chart shows mathematics achievement scores over the last few decades, broken out by the age of the students.* CENGAGE LEARNING, GALE.

graduation. In most cases, individual schools are compelled to use tests in this manner by school districts or states. In 2007 more than two-thirds of all aspiring high school graduates were required to pass a high school exit exam to earn their diplomas. Alternatively, students who fail to pass the high school exit exam or to satisfy other requirements needed to attain a high school diploma may choose to take an alternative test of academic achievement in hopes of earning a general equivalency diploma.

State and federal policy makers also compel schools to assess student achievement to hold schools accountable for student learning. In 2001 the federal No Child Left Behind (NCLB) Act strengthened the call for accountability in core academic subjects by requiring that elementary, middle, and secondary schools present data each year on their students' academic achievement. Consequences for schools failing to meet that which is considered adequate yearly progress include financial sanction and, at the extreme, shift of personnel from failing schools to other schools.

At the postsecondary level, most baccalaureate-granting institutions and graduate and professional schools require that applicants take an entrance exam such as the SAT reasoning test, the American college test (ACT) for baccalaureate programs, the graduate record examination (GRE), or other professional exam such as the graduate management admission test (GMAT) for business or the medical college admission test (MCAT). Baccalaureate programs also may require one or more subject-specific achievement tests. Many colleges and universities use their own placement tests to determine what courses students must take in mathematics or composition. Although college instructors assess student achievement in the context of individual courses, and some colleges have summative assessments of student learning (such as an undergraduate thesis or comprehensive exam), most colleges in the past have not evaluated how much students learn over their undergraduate careers. However, as a result of pressures exerted by organizations such as the Spellings Commission, many colleges and universities are now considering assessments of achievement with which they could evaluate how much students learn during college (Secretary of Education's Commission on the Future of Higher Education, 2006). Finally, many professions (including those in law and medicine) regulate entrance, in part, with a standardized exam of student achievement.

## TRENDS AND DISPARITIES IN ACADEMIC ACHIEVEMENT

**Longitudinal Trends** The National Assessment of Educational Progress (NAEP) provides a longitudinal measure of achievement that allows for direct comparison across years. National averages of student test scores have been fairly steady over the past 30 years. Figures 1 and 2 show mathematics and reading achievement scores on the NAEP, over the past few decades, broken out by the age of the students. Whereas 9-year-olds show improvement in their mathematics achievement, 13- and 17-year-olds have fairly consistent mathematics achievement scores. Reading scores changed little between 1971 and 2004, although there is more variation across time for the youngest students (U.S. Department of Education, 2004).

High school grade point averages (GPAs), by contrast, are less stable over time. The average GPA earned by high school graduates has increased steadily from 1987 to 2000 in every academic subject (U.S. Department of Education, 2005). Whether this shows that academic achievement has increased or simply reflects grade inflation is a topic of debate.

**Racial and Ethnic Variation** Racial and ethnic gaps in standardized test scores occur in almost all large, nationally representative databases. The magnitude of these gaps varies by academic subject, student age, and cohort. Gaps persist in standardized exams administered to high school students (the SAT and ACT) and college graduates (the GRE, GMAT, law school admission test [LSAT], and MCAT).

Inequalities also appear across racial and ethnic groups in high school GPA, with Black and Hispanic students having lower GPAs than White students and Asian students having higher GPAs than White students. Racial and ethnic differences in grades are similar in math, science, English, and social studies. Between 1987 and 2000 the Black-White GPA gap in all four subjects increased, whereas the Hispanic-White gap grew slightly in math and science but declined in English and social studies. The advantage Asian American or Pacific Islander students held over White students has decreased since 1987 (U.S. Department of Education, 2005).

**Socioeconomic Variation** Standardized test scores also consistently vary across measures of socioeconomic status. Differences in socioeconomic status across racial and ethnic groups account for some, but not all, of the gaps described above. Whether measured by parental education, occupation, or family income, less advantaged children have lower average levels of academic achievement than more advantaged children across a range of measures.

**Sex Variation** Gender differences in academic achievement vary over time and across subjects. Girls consistently have outscored boys in reading and writing on the NAEP but have not always had a clear advantage in mathematics and science. Girls enjoy a clear advantage

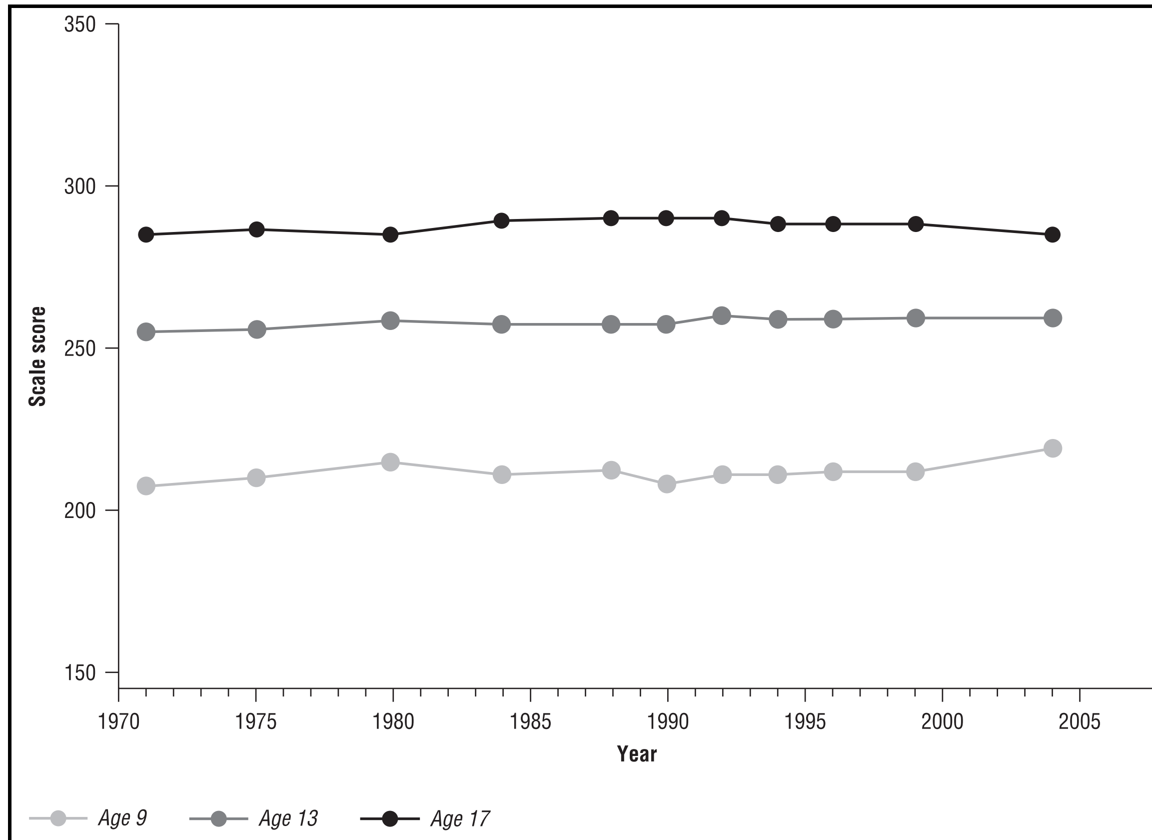


*Figure 2. This NAEP chart shows reading achievement scores over the last few decades, broken out by the age of the students.* CENGAGE LEARNING, GALE.

in grades, however. In math, science, English, and social studies, between 1987 and 2000, male students never had a higher average GPA than female students (U.S. Department of Education, 2005).

## OUTCOMES

Academic achievement contributes to a range of important adult outcomes. Secondary school academic achievement is among the most powerful predictors of attending college and of the selectivity of the various colleges students attend. Most people consider the primary benefits of academic achievement and higher education to be financial. However, in addition to economic returns, academic achievement and educational attainment confer a range of nonfinancial rewards.

**Labor Market** Achievement test scores in high school increase the likelihood that adults will be employed and, among those who are employed, make substantively and statistically significant contributions to earnings many years after students leave high school. Academic achievement measured by high school grades may also affect earnings, although the evidence is thin compared to test scores. In the United States, James Rosenbaum and Takehiko Kariya (1991) found that high school grades do not have a significant effect on earnings for men, but they do for women. Returns to academic achievement are not limited to students who complete high school. A study conducted by John Tyler, Richard Murnane, and John Willett (1999) showed significant, positive effects of GED scores on earnings for White and non-White female and non-White male high school dropouts. College grades also appear to have a significant, positive effect on earnings for both men and women (Jones & Jackson, 1990). Although the academic achievement of college graduates varies substantially, their average level of academic achievement is greater than that of otherwise similar adults without a college degree. For example, in 2003 the average levels of prose and document literacy of adults with a bachelor's degree were about four-fifths of a standard deviation higher than those of adults with a high school diploma (Kutner et al., 2007). Because the baccalaureate signals a broad level of academic achievement, the literature on the economic returns to academic achievement as measured by educational attainment is briefly reviewed.

## GRADE RETENTION VS. SOCIAL PROMOTION

Schooling in the United States is age graded with students progressing as they age, at least through the primary and middle grades. "Social promotion" has been criticized for passing students through the educational system without requiring that they are equipped with the knowledge and skills to succeed in the next grade level. This concern was heightened after the Ronald Reagan Administration's publication of *A Nation at Risk: The Imperative for Educational Reform* (1983), which declared that America's schools were failing to remain competitive with other countries.

Some studies show positive effects of grade-retention (Alexander, Entwisle, & Dauber, 1994), but the majority of research on outcomes of retention show that at best there is no difference between retained and promoted students, and at worst there are significant negative consequences (Heubert & Hauser, 1999). One study examined the outcomes of 44 different studies on grade retention and showed that the academic achievement of students that were retained was, on average, 0.4 standard deviations below that of promoted students (Holmes & Matthews, 1984). Research also shows that students retained in the eighth grade are significantly more likely to drop out of high school than are similar students who were not retained (Jacob & Lefgren, 2007).

College graduates make significantly more money than students who complete only high school. In 2005 the median income for adults (ages 25 to 64) who do not finish high school was $16,678 compared to $25,389 for those who complete only high school and $42,584 for adults with a bachelor's degree (U.S. Census Bureau, 2007).

Estimating just how much students benefit from attending college is difficult because there are other characteristics of students that complete only high school that differentiate them from college graduates. Several studies using innovative techniques have found a significant effect of college-going, yet the effect is smaller than the bivariate association between education and income (Angrist & Krueger, 1991).

**Other Benefits** Individuals who excel in academic work benefit not only from increased income but from a variety of other outcomes. Mark Kutner et al. (2007) showed that adults with greater levels of literacy are more likely to vote; utilize print and Internet sources for information about current events, public affairs, and the government; and volunteer. Also, individuals who pursue more schooling have a greater understanding of current events and political issues, benefit from greater control over their work environment, and are healthier (Pallas, 2000).

### WHERE THE STUDY OF ACADEMIC ACHIEVEMENT IS MOVING

Research on academic achievement will continue to focus largely on schools' contributions to the production of academic achievement and the effects that student academic achievement has on adult outcomes. Within primary and secondary schools, researchers and policy makers are increasingly interested in evaluating student growth, rather than achievement, at one point in time. In part as a response to potential sanctions imposed by the federal government under NCLB, many states have proposed using growth models to measure student proficiency rather than relying on changes in mean student achievement. More recently, interest in measuring learning has spread to higher education. As part of its effort to increase the quality of information available to students choosing among colleges, the U.S. Department of Education is advocating for a common database to which colleges report how much their graduates learn in college (Secretary of Education's Commission on the Future of Higher Education, 2006).

Research will also continue to explore how academic achievement shapes both occupational and nonoccupational outcomes. Some argue that the occupational returns to academic achievement are higher than ever as a result of rapid changes in technology and the availability of blue-collar jobs, whereas others suggest that personal attributes correlated with academic achievement, such as communication and interpersonal skills, may be more powerful predictors of labor market returns than academic achievement itself (Bowles & Gintis, 2002).

Sociologists of education have effectively shown how academic achievement is a factor throughout the life course as it is both a function of social origins and a predictor of future outcomes. Unfortunately this research also shows significant disparities in academic achievement between different racial and ethnic groups and students from varying levels of socioeconomic status. One hopes that as research on academic achievement progresses, researchers will gain greater insight into the processes that result in these inequalities and will be better equipped to form policies that can reduce disparities in academic achievement across groups.

**SEE ALSO** Volume 1: *Cognitive Ability; Gender and Education; High-Stakes Testing; Policy, Education;*

*Racial Inequality in Education; School Culture; Socioeconomic Inequality in Education; Stages of Schooling.*

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***Erika Felts***
***Eric Grodsky***


## ACADEMIC MOTIVATION

SEE Volume 1: *Academic Achievement.*

## ACTIVITY PARTICIPATION, CHILDHOOD AND ADOLESCENCE

Extracurricular activities, or organized activities, are defined as voluntary, structured, school- or community-based activities in which school-age children and

adolescents (ages 6 to 17) can participate outside of normal school hours. They include, but are not limited to, athletics, academic clubs (often called cocurricular activities), fine arts, musical activities, lessons, student government, and after-school programs. These are in contrast to alternative, unstructured, free time activities (i.e., hanging out with friends, watching television, and playing games). Research on adolescent leisure time indicates that a majority of children and youths participate in extracurricular activities. Accordingly, these activities are increasingly regarded as normative developmental contexts for the American youth. A review of participation in extracurricular activities carried out by Amy Feldman and Jennifer Matjasko (2005) suggests that extracurricular activities are central developmental settings for school-age children that are associated with many positive developmental outcomes.

The heightened interest in structured, out-of-school contexts stems from a number of factors. First, considerable increases in maternal employment and youth leisure time have created a gap in supervision between school and parental work hours. Investigators regard extracurricular activities as contexts that can limit the time a youth spends in unsupervised and unstructured activities outside of school, which have both been linked to negative developmental outcomes. Second, extracurricular activities are seen as opportunities to combat increases in academic underachievement, especially for at-risk youth. Last, extracurricular activities are considered to be contexts that promote mastery of skills not traditionally taught in the classroom, such as leadership, organization, and social problem solving. These influences have contributed to an increase in the popularity and availability of extracurricular activities since the early 1980s.

## PARTICIPATION IN ORGANIZED ACTIVITIES

Approximately half of school-age children's time is devoted to their leisure activities. For many youths, most of these activities are school-sponsored extracurricular activities. In 2003, according to U.S. census data, 70% of school-age children (ages 6 to 17) were involved in at least one extracurricular activity (Dye & Johnson, 2007). Similarly, data from the National Longitudinal Study of Adolescent Health suggest that more than 70% of

***Band Practice.*** *Approximately half of school-age children's time is spent in leisure activities.* AP IMAGES.

adolescents (ages 12 to 17) participate in at least one extracurricular activity (Feldman & Matjasko, 2005). Approximately 7 million children are enrolled in after-school programs. Overall, these percentages represent increases in extracurricular participation since the early 1970s (National Center for Youth Statistics, 1996).

School-age children initiate and continue to participate in organized activities for a variety of reasons; these reasons include, but are not limited to, developing and learning new skills, involvement in competition, developing one's identity, having fun, being with friends, and passing time. Additionally, school-age children are more likely to participate in extracurricular activities if they feel they are competent in the particular activity type. However, youths are not always the initiators of their participation in these activities. Parental encouragement affects participation decisions, and this is especially true for younger children who are more likely to be involved in activities valued by their parents.

There are considerable barriers to extracurricular participation—the most basic of which are prerequisites to involvement, including previous participation in the particular activity, academic performance requirements, and minimum skill level in the activities. Substantial barriers to participation also exist for families living in poverty, for whom availability of and access to extracurricular activities remain considerably lower than their counterparts at higher income levels. Inner-city and rural schools generally offer fewer opportunities for extracurricular participation, where economic resources tend to be fewer. In addition, lower-income families may have difficulty paying for supplemental fees that accompany some organized activities. Other obstacles include language barriers, difficulty finding transportation to and from the activity setting, and youth responsibilities that limit the amount of time available for participation (i.e., caring for younger siblings, working, and so forth).

Such factors may explain the lower rates of participation for the poorer youth. Data from the National Survey of America's Families, a nationally representative study of more than 42,000 households, suggest that youths living below the poverty line are half as likely to be involved in extracurricular activities as compared to those children whose family income is at least twice the income level defined as the federal poverty line (Casey, Ripke, & Huston, 2005). Notably, the National Center for Youth Statistics (1996) found that overall rates of high school senior extracurricular participation increased between 1972 and 1992 but not for those in the lowest income brackets. This conclusion is especially disheartening when considering that low-income children may garner the most benefit from participation.

## HURRIED CHILD SYNDROME

Most research suggests that organized activity participation is beneficial for youth, yet there is mounting concern in the popular media that participation has become excessive. According to the over-scheduling hypothesis, youth are under considerable parental pressure to participate in numerous activities in order to increase chances for long-term educational success. This pressure and resulting stress and time commitment are thought to be harmful to youth and family functioning.

To evaluate the scientific basis of the over-scheduling hypothesis, Joseph Mahoney, Angel Harris, and Jacquelynne Eccles (2006) analyzed activity participation for a nationally representative sample of youth in the Panel Study of Income Dynamics (PSID). They conclude that many of the tenets of the over-scheduling hypothesis are not supported. First, most youth reported intrinsic (i.e., enjoyment) over extrinsic (i.e., parental pressure) motives for participation. Second, a majority of youth spent fewer than 10 hours per week participating in organized activities, with higher levels of participation associated with psychosocial adjustment and academic achievement. For a small percentage (less than 5%) participating more than 20 hours per week, only a few associated negative impacts were detected. By contrast, negative outcomes were consistently associated with no participation. Overall, the authors found minimal support for the over-scheduling hypothesis, but further support for increasing the availability of youth organized activities.

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Involvement in extracurricular activities is also dependent on a number of other characteristics beyond income status, including age, gender, race, and neighborhood context. First, studies suggest differing rates and type of extracurricular involvement according to a

child's age. Children are more likely to participate as they progress through elementary school, and this participation usually peaks in adolescence. Younger children are more likely to participate in lessons (i.e., music, dance), whereas adolescents are more likely to participate in sports.

Second, gender may influence the type of extracurricular involvement. Boys are more likely than girls to be involved in unorganized activities (i.e., hanging out with friends), whereas girls report more participation in clubs and lessons (Dye & Johnson, 2007). Studies exploring gender differences in extracurricular participation for school-age children find that girls are more likely to explore a wider variety of extracurricular activities as compared to boys. This difference may stem from boys being overrepresented in sports participation, a pattern found in a number of other investigations. These trends may reflect internal or external pressure to conform to traditional gender stereotypes. Interestingly, the gender of siblings and parents can affect activity choice. Children are more likely to be involved in stereotypically male activities when they have male brothers or when they are involved in more activities with their father as opposed to their mother.

Third, the amount and type of participation varies across race and ethnicity. According to U.S. census data (2003), European American school-age children are more likely to participate in extracurricular activities than traditionally defined minority students (Dye & Johnson, 2007). Hispanic adolescents, especially those of Mexican origin, report the least amount of participation in sports as compared to their European American, African American, and Asian counterparts. Furthermore, Hispanic students may also be at risk for lower extracurricular participation in general.

Finally, neighborhood context may impact organized activity participation. Findings from Reed Larson, Maryse Richards, Belinda Sims, and Jodi Dworkin (2001) suggest that urban youth spend significantly less time than their suburban counterparts in structured activities outside of school, taking into account a number of individual- and family-level factors. One explanation for these results may be the increased likelihood for restrictive parenting in more dangerous communities. Additionally, as mentioned previously, barriers to participation may be high for youths in urban, low-income settings, and the availability of extracurricular activities may be low.

The above differences in extracurricular participation illustrate that these activities are not isolated from other developmental contexts in which they are situated. Accordingly, differences in rates and type of participation are dependent on a number of child-, family-, and community-level factors. Researchers argue that further work is needed to elucidate the patterns of activity participation across different ages, genders, races, and poverty levels—including the amount and type of participation at any given time during the school years. They also contend that further work is required to investigate the developmental outcomes associated with participation and the possible mechanisms underlying these relations.

## DEVELOPMENTAL CONSEQUENCES OF ORGANIZED ACTIVITY PARTICIPATION

Given that a majority of school-age children are involved in extracurricular activities, it is imperative to examine the consequences of this participation. Researchers studying the impact of extracurricular involvement on American youth tend to find benefits for child and adolescent adjustment. On the whole, partaking in extracurricular activities may provide adolescents with the social and human capital necessary to make a successful transition into American adulthood; in addition, this involvement will likely provide more opportunities for positive social, emotional, and academic development.

In regards to social adjustment, extracurricular contexts are associated with the development of relationships with peers and mentors and seem to increase the opportunity to observe and partake in prosocial group norms and behavior. In addition, extracurricular involvement is linked to forming friendships with academically oriented peers who are more apt to abide by conventional group norms, such as not skipping school and avoiding drug use. Accordingly, involvement in extracurricular activities is correlated with fewer behavioral problems among adolescent youth. Unstructured and unsupervised activity settings, by contrast, are related to behavior problems and delinquency, especially for low-income youth, who are already at heightened risk for these issues. Taken together, these findings suggest that extracurricular participation may be a way to address social adjustment disparities between low-income youth and their counterparts of higher socioeconomic status.

Research also suggests a link between extracurricular participation and positive psychological and emotional functioning. For example, some adolescents involved in extracurricular activities are less likely to experience a depressed mood, less likely to have anxiety problems, and are more likely to have high self-esteem than those involved in unsupervised and unstructured out-of-school activities. In addition, extracurricular activity contexts may support positive identity development. Bonnie Barber, Margaret Stone, James Hunt, and Jacquelynne Eccles (2005) argue that extracurricular activities promote positive identity development through opportunities for undertaking leadership positions, exploring and

expressing one's identity in a social context, fostering relationships with peers and mentors, and developing individual interests and skills. However, it must be noted that negative identity development can also occur in these contexts, although research has generally linked extracurricular participation with positive impacts on identity.

Last, academic performance and achievement are also associated with organized activity participation. These include higher GPAs and lower rates of grade retention and school dropout. Presumably, improvements in academic functioning can be attributed to opportunities in extracurricular settings for positive social, psychological, and emotional development. Additionally, extracurricular activities are associated with increased cognitive stimulation, school engagement, and school connectedness and heightened motivation for learning, each of which may contribute to positive academic outcomes. Longitudinal research has also revealed long-term positive adjustment associated with extracurricular participation, including improved future employment and increased adult civic involvement, even after accounting for a number of child- and family-level factors.

## FACTORS THAT INFLUENCE THE IMPACT OF ORGANIZED ACTIVITIES

An abundance of research has shown that extracurricular participation among youths is associated with numerous positive developmental outcomes; however, such benefits are not inevitable. A variety of factors impact the degree to which extracurricular participation is linked to beneficial outcomes. For example, developmental outcomes may depend on the consistency of participation. Jonathan Zaff, Kristin Moore, Angela Papillo, and Stephanie Williams (2003) found that consistent adolescent activity participation across the high school years was associated with more positive developmental outcomes than either occasional or no participation, even after controlling for individual- and family-level characteristics. Outcomes may also vary depending on the breadth and intensity of a youth's extracurricular involvement. Some studies have found that participation in a variety of extracurricular activities is more beneficial to youths, perhaps because it provides students with a variety of skills and experiences, allows for greater practice of these skills across multiple contexts, and provides additional resources that may buffer negative experiences occurring in other activities or unsupervised contexts.

High-intensity participation (i.e., more frequent participation in a fewer number of organized activities) has also been associated with positive outcomes, though findings are somewhat mixed. Youths participating in fewer organized activities may be able to invest more time and effort into these activities, which may lead to greater knowledge and skill mastery. However, other studies (Busseri, Rose-Krasnor, Willoughby, & Chalmers, 2006) have found that participation in a variety of activities is associated with more positive outcomes than higher intensity extracurricular participation. Finally, some have suggested that too much time invested in extracurricular activities and other organized activities can lead to having an overly demanding schedule, which may be associated with negative outcomes. However, research generally suggests that greater extracurricular involvement is associated with improved youth adjustment.

The associated impacts of extracurricular involvement on development may also depend on the type of activity in which youths are involved. For example, studies investigating high school sports suggest both positive and negative consequences associated with sports participation. Beneficial impacts of sports participation include increases in initiative, educational aspirations, positive attitudes toward school, and high school completion. Sports involvement also offers opportunities to build skills such as problem solving, goal setting, managing time and emotions, teamwork, and maintaining physical health. However, other studies indicate negative associations with sports activity. For example, longitudinal work by Eccles and Barber (1999) found that sports involvement may increase the likelihood of alcohol use among adolescents (during the high school years), primarily because of specific peer networks in these settings. These contradictory findings suggest that beneficial impacts of extracurricular involvement may depend on the type of activity the youth is involved in, as well as the specific processes and peer associations occurring in these contexts.

## INVESTIGATING UNDERLYING DEVELOPMENTAL PROCESSES

Unfortunately, few studies have examined the developmental processes taking place in the extracurricular settings that promote youth development. However, an initiative put forth by the National Research Council and Institute of Medicine examined features of organized activity contexts that are related to positive developmental outcomes—these include setting safety, structure, and prosocial norms, and opportunities for feelings of belongingness, supportive relationships, and skill and self-efficacy building. Extracurricular settings that meet these features are likely to contribute to positive youth development.

Many researchers are calling for further exploration of the underlying causes of positive outcomes for youths involved in extracurricular activities and the examination of specific processes in these settings. One possibility that

would tie this work together is examining participation with a more holistic approach. In their review of extracurricular involvement, Feldman and Matjasko (2005) highlighted the need for investigations focusing on the patterns of youth extracurricular participation and their developmental implications. They contend that a paucity of research has compared involvement in more than a single extracurricular activity and that different patterns and profiles of participation may lead to different outcomes.

## POLICY IMPLICATIONS AND RESEARCH DIRECTIONS

Overall, most research on organized activity settings has shown positive consequences of participation for social, emotional, and academic development. This fact has fueled funding initiatives in both the public and private sectors to expand the availability and accessibility to extracurricular activities. Most notable is the 21st Century Community Learning Centers program, a federal initiative supporting funding of out-of-school youth programs.

Unfortunately, financial support for extracurricular activities is often pitted against funding for traditional school academic initiatives that have taken even greater precedence since the initiation of No Child Left Behind in 2001. School districts making budget concessions are more likely to cut funding for extracurricular activities before other list items. Additionally, U.S. Supreme Court decisions have actually increased barriers to participation. The Court has ruled in favor of (a) allowing schools to limit participation based on funding problems and (b) drug testing for all students partaking in extracurricular activities. Schools may also require students to meet minimum academic standings in order to participate in an organized activity. Unfortunately, these policies may limit extracurricular involvement for precisely those students who stand to benefit the most from them, as it could promote a return to positive developmental trajectories.

Despite the increased support and interest in extracurricular activities, substantial barriers to participation exist for youths from low-income families. Researchers call for policy makers to decrease barriers to participation for these youths, as extracurricular activities may address the socioeconomic disparities found in school achievement and overall adjustment. One possibility is to increase monies to low-income families in order to facilitate increased extracurricular involvement. However, David Casey, Marika Ripke, and Aletha Huston (2005) maintained that policies such as welfare reform have done little to increase family income. Family resources may be augmented using subsidies that cover fees and transportation costs for extracurricular activities. In fact, studies offering monetary subsidies and monetary assistance to families, such as the New Hope Evaluation in Milwaukee, saw increases in youth organized activity participation. Another implication is to increase funding for extracurricular activities at the school level, especially in low-income areas where availability is limited. A substantial way to guarantee funding is to include extracurricular involvement as part of a child's legal entitlement for a minimally adequate education. On the whole, researchers are calling for sustained funding for existing programs and an increase in the availability of extracurricular activities, especially for children in low-income communities.

Past work also suggests that improving the quality of extracurricular activities offered to youths should be a target for policy makers. James Quinn (2005) asserts that relatively few activity programs meet quality standards suggested by research. In addition, the focus of many programs has turned to raising test scores rather than concentrating on other important aspects of development. This change has resulted from an increased attention on standardized test scores since the initiation of No Child Left Behind.

Further research is necessary to inform policy practices suggested above. Researchers are increasingly moving toward investigations that offer a deeper understanding of extracurricular activities and their developmental impacts. Investigations such as those by Larson and colleagues (2005) demonstrates how research can elucidate the underlying processes that may underlie the impact of extracurricular involvement on youth adjustment. Some scholars suggest that a person-environment fit model be used when investigating whether and how extracurricular participation benefits young people. Indeed, Eccles (2005) suggests that future research is necessary to explicate the specific characteristics of the activity settings and the specific adult and student behaviors that influence participants. Further research is also necessary for explaining who participates in various extracurricular activities, who continues to participate, and what influences the type of organized activity youths decide to become involved in.

**SEE ALSO** Volume 1: *Data Sources, Childhood and Adolescence; Academic Achievement; Drinking, Adolescent; Drug Use, Adolescent; Identity Development; Self-Esteem; Social Capital; Sports and Athletics.*

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# ADOPTED CHILDREN

Adoption is one way that family formation occurs. The term *adoption* has a fairly uncomplicated connotation, but the process itself is multifaceted and encompasses several types of adoptive arrangements, each with its own set of administrative protocols, legal regulations, as well as developmental implications for the children. Although there are many similarities across the various types of adoption in how this process affects lifespan development, recent research has uncovered a more refined understanding of the discrete differences among diverse populations of adoptees.

## THE ADOPTION PROCESS

In the early 21st century, formal adoption refers to a "legal procedure through which a permanent family is created for a child whose birth parents are unable, unwilling, or legally prohibited from caring for the child" (Triseliotis, Shireman, & Hundleby, 1997, p. 1). Over the past several decades, this "legal procedure" has become increasingly popular, yet there is no nationwide governmental authority that oversees all types of adoptive placements, despite the fact that all adoptions entail some sort of legal involvement. As such, determining the exact number of adoptions that occur for every type of adoptive arrangement is difficult. Currently, research estimates that there are about 1.5 million adopted children in the United States (Evan B. Donaldson Adoption Institute, 2002) and that about 2–4% of families include an adopted child. There are two exceptions to the imprecise collection of statistics on adoption, however: international adoptions and the adoption of children from the U.S. foster-care system (public adoptions). Due to legislative changes and other societal transformations, both of these forms of adoption have become increasingly widespread (U.S. Department of Health and Human Services, 2008). Not only are there expanding notions of who is qualified to be an adoptive parent, but potential adoptees are no longer limited to "healthy infants." The population of adoptees has become increasingly diverse in terms of age, race, country of origin, and developmental background, whereas contemporary potential adoptive parents encompass a wide range of demographic characteristics.

In the United States, adoptions can occur with the assistance of a public or private agency, or independently from a government-certified agency. Public agency adoptions are those that involve youth in the child welfare system (foster care or other type of out-of-home care). Such adoptions require the voluntary or involuntary termination of (biological) parental rights and include a range of children both in terms of demographic characteristics and developmental histories. Independent adoptions indicate that the arrangement occurred without the

***National Adoption Day.*** *Adopted children from left, Christopher Futschik, 10; Jessica Sherman, 8; Achaunti Strong, 5; and Johane Strong, 7; stand with Connecticut Attorney General Richard Blumenthal to celebrate National Adoption Day in Hartford, Connecticut.* AP IMAGES.

assistance of an official agency but instead through a third party such as a clergy, doctor, or attorney who mediates the agreement between the birthparent and adoptive caregivers, with a judge authorizing the final agreement (Stolley, 1993). Private adoptions refer to the assistance of a nonpublic adoption agency in negotiating the matter; infants and children from a variety of backgrounds are placed through private adoption. Within these agency or independent entities, adoptions may be domestic or international, and may also involve transracial placements.

Although the practice of transracial adoptions has a tumultuous history—and was actively discouraged by adoption practitioners for many years—federal child welfare legislation from the 1990s has helped break down the barriers to this practice. In part due to the fact that so many ethnic minority children were residing in foster care indefinitely, the Multiethnic Placement Act of 1994 and its amended provisions, the Interethnic Placement Provisions of 1997, were passed by Congress; both prohibit the delay or denial of an adoptive placement on the basis of race, color, or national origin of either the potential adoptive parent or the adoptee (U.S. Department of Health and Human Services, 1997). Simply put, adoption practitioners cannot legally factor in these characteristics when making decisions about the potential adoptive placement. Whereas there was once concern that the psychological adjustment of transracial adoptees would be irrevocably harmed, several longitudinal studies of children and young adults have significantly disputed this notion (Brooks & Barth, 1999). Yet transracial placement needs to be handled with sensitivity and careful forethought. This process may still engender difficulties for young adoptees in terms of development of racial identity and acculturation, while the adoptive family may struggle with feelings of isolation in the community (Lee, 2003).

In contrast to most of the other categories of adoptions, international adoptions are fairly well documented by the federal government. International or intercountry adoptions refer to the adoption of nonnative children and typically involve infants. This form of adoption has become increasingly popular in recent decades due to worldwide changes in countries' economic and political

circumstances (e.g., Romania, Russia) as well as demographic and social transformations in the United States. For example, the number of native infants available for adoption in the United States has decreased due to increases in the utilization of abortion and in growing acceptance of single-parent households (Bartholet, 1993). Around the world, international adoptions have increased, including the adoption of American children abroad. Increasing in popularity since the Korean and Vietnam Wars, this practice has become especially widespread since the mid-1980s. Between 2002 and 2007, Americans adopted 100,000 children from other countries (U. S. Department of State, 2008). In 1990, for example, the number of international adoptions by American parents was just over 7,000 children; by 2006, this figure had tripled. Furthermore, children are adopted from dozens of countries, with the greatest number in 2006 originating from China, Guatemala, Russia, and South Korea.

In recent years, the face of adoptive parents has evolved dramatically. Whereas adoption was once primarily undertaken by childless, two-parent couples, in the early 21st century gay and lesbian couples, single parents, and low-income families are actively seeking to adopt children (Howard, 2006). It was only as recently as the early 1970s that single, unmarried men were able to adopt children on their own (Dorris, 1989). For foster children, it is not as uncommon as once thought for *kin adoption* to occur (i.e., a grandmother or aunt chooses to adopt a relative who has been placed in foster care; U.S. Department of Health and Human Services, 2002).

## HISTORY OF ADOPTION

The practice of adoption has been evident, both formally and informally, for centuries, albeit with motives that are distinct from the contemporary American practice of adoption (Sokoloff, 1993; Triseliotis et al., 1997). For a number of centuries, maintaining the familial lineage was one of the ultimate goals of adoption. In ancient Rome, adoptions were performed for the sake of the adoptive family sustaining its familial lineage. Adult males were preferred for adoption in order to provide heirs to Roman emperors (Sokoloff, 1993; Triseliotis et al., 1997). In 17th-century England, parentless or dependent children were tended to in a manner that obviated the need for adoptive homes. The de facto policy for tending to unwanted children included placing them in almshouses or relegating them to positions as labor apprentices, indentured servants, or domestic help (Sokoloff, 1993).

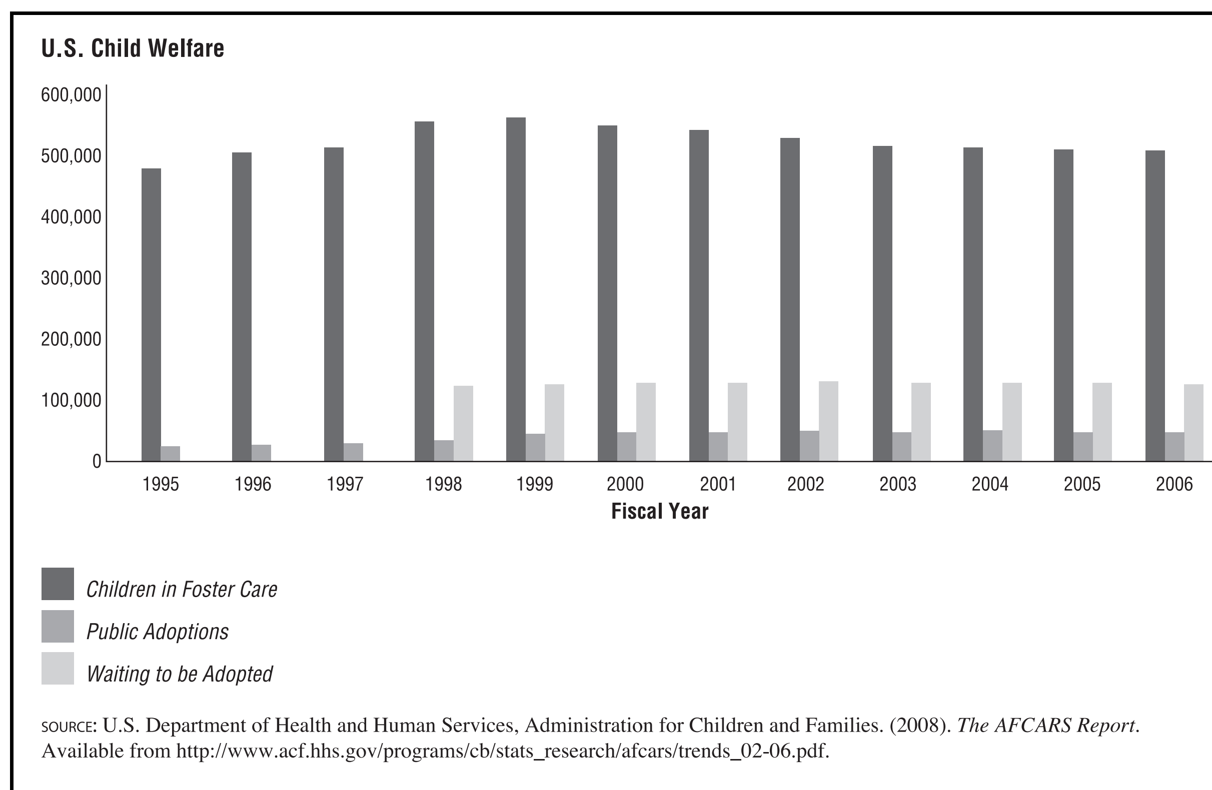
In later centuries in the United States, a controversial method for tending to dependent children developed. Over the course of several decades, these children were shipped via trains from urban areas (primarily New York City) to farms in the Midwest, a movement referred to as the *orphan trains.* This permanent relocation was spearheaded by Charles Loring Brace under the auspices of the Children's Aid Society (also founded by Brace) because he felt that children deserved a better upbringing than living in institutions, or on the streets (O'Connor, 2001). Upon arriving at their destinations, the young children were put on display to the public, who then selected the children they wanted, often as farm labor. Although Brace's intention was to place unwanted children in stable, permanent adoptive families, the formal adoption of these children did not often occur. Moreover, many of these children were technically not orphans and had living biological parents in their former residences. However, the fact that many of these children may have benefited from this move west into secure families cannot be overlooked (O'Connor, 2001).

By the early 20th century in the United States, legal guidelines for adoptions emerged—mostly directed at protecting the privacy and secrecy of both the adoptee and the biological parent—and adoption has fluctuated in popularity since that time. The demand for infants, however, has remained fairly steady since World War I (Sokoloff, 1993).

## HOW ADOPTION AFFECTS INDIVIDUALS' PSYCHOSOCIAL DEVELOPMENT

Do adopted children encounter more identity and developmental difficulties than nonadopted children? For many decades, researchers and practitioners assumed that adopted children were at a higher risk of poor outcomes in numerous interpersonal and developmental domains (Brodzinsky, Schecter, Braff, & Singer, 1984; Elonen & Schwartz, 1969; Sharma, McGue, & Benson, 1998). In part, theories for such problematic outcomes have vacillated from biological issues, such as the genetic inheritance of behavior problems (i.e., impulsivity; Deutsch et al., 1982), to psychodynamic issues related to long-term confusion on behalf of an adopted child about his or her familial origins, often referred to as the *adopted child syndrome* (Kirschner, 1996), to difficulties stemming from having resided in troubled international regions (Tizard, 1991). Alternatively, some researchers suggest that tainted perceptions on the part of adoptive parents and/or mental health professionals—who perhaps unwittingly look for signs of difficulties in adopted youth—fuel the reported higher rates of problem behaviors (Warren, 1992; Wegar, 1995).

Yet until the late 1990s, some of this research was flawed methodologically in that all types of adopted children were clustered together in many analyses, causing the entire population of adoptees to appear




SOURCE: U.S. Department of Health and Human Services, Administration for Children and Families. (2008). *The AFCARS Report*. Available from http://www.acf.hhs.gov/programs/cb/stats_research/afcars/trends_02-06.pdf.

***Figure 1.*** CENGAGE LEARNING, GALE.

troubled. More recent research, by contrast, has focused on specific subgroups of adoptees and thus has teased apart some of this heterogeneity. Such studies conclude that with so much variability in the types of adoptive placements, the developmental trajectory of the adoptee is partly contingent on how the child is placed in the home (Haugaard, 1998).

## ADOPTION OF FOSTER CHILDREN

The foster-care population consists of children burdened by particularly harsh early developmental histories, primarily due to circumstances of physical and/or sexual abuse and neglect. For these reasons, and because foster children frequently already have biological families from whom they must separate, the adoption of foster children can be precarious. That is, public adoptions, unlike other types of adoptions (e.g., private adoption of infants), mostly entail the placement of toddlers and children who, because of their early histories, may possess emotional and behavioral difficulties that can engender unstable transitions into their new adoptive homes. Not only do many foster children have histories of maltreatment, but they are generally older and thus may have rather distinct memories—or ongoing relationships—with their biological parents and families, as well as with siblings who are also placed in foster care. Although parents who undergo a public adoption are well-intentioned, these types of adoptions have inherent risks that may not be present in other types of adoptions. Research on adopted foster children indicates that both male and female adoptees may evidence internalizing and externalizing behavior problems, such as depression and anxiety and disruptive behavior disorders for extensive periods of time—especially if no services are provided (Simmel, 2007). Providing accurate preparation and ongoing services to the adoptee and the adoptive family is critical for cultivating and sustaining healthy psychosocial development (Simmel, 2007).

Recognizing that foster children face decreased odds of entering into an adoptive arrangement as they mature, the U.S. Congress passed legislation in 1997 (the Adoption and Safe Families Act) that partially addressed this challenge. Foster children beyond the age of 5 years are not likely to be adopted. If they do not reunify with their biological families, they remain in foster care or other institutional arrangements until age 18. Thus, for children in the child welfare system, adoption is one of the most desirable placement outcomes as it involves a sense of permanency for children, as opposed to the "temporary" option of residing in a succession of foster and group

homes. The passage of the Adoption and Safe Families Act in 1997 ushered in a revived focus on the permanency and safety of foster children, and consequently the number of public adoptions increased in the United States (U.S. Department of Health and Human Services, 2008).

## RECENT CHANGES IN ADOPTION PRACTICE

The potentially problematic outcomes for adopted children are not limited to foster children. Infants adopted at birth—including through private adoptions—are not necessarily free of problems. Difficulties in acquiring a sense of belonging and developing a personal identity may haunt some adoptees regardless of when or how they came into the adoptive home. Anecdotally, two recent personal memoirs shared insights about the authors' personal histories of adoption, the developmental impact of being an adoptee, and surrendering an infant to adoption. A. M. Homes (2007), adopted at infancy, discussed her search for and eventual reunion with her biological parents and the complexities of this process on her identity development, particularly when this new relationship became problematic. In contrast, Meredith Hall (2007) wrote about the painful process of being a pregnant teen in the 1960s and the extensive efforts to cover up her pregnancy and the adoption of her infant son. She eloquently described the impact on her own identity development, her reunion with her biological son, and how they both navigated her new role as a mother figure in his life as a young adult.

An increasingly common practice is open adoption, or maintaining some form of contact among the child adoptee, his or her adoptive family, and the biological parent or family who surrendered the child. This contact may take place through in-person contact, letters, phone calls, or e-mails. The extent of these contacts varies. For some it may be an annual letter from the adoptive parents; for others it may be monthly visits with the biological parent. As children begin to comprehend the nature of what it means to be adopted, usually between the ages of 7 and 11, allowing access to biological families holds enormous potential for facilitating positive growth. During adolescence, a time when struggling with identity issues is paramount, having some continuity with one's biological heritage could be instrumental in fomenting one's sense of self (Brodzinsky, 2005). This practice demonstrates a striking procedural change from traditional adoption practice, whereby all information about both parties was strictly concealed (Sokoloff, 1993). Reflecting societal changes in the 1970s pertaining to personal liberties (e.g., the civil rights movement, the women's movement), as well as an increase in both adult adoptees and birthparents seeking information about and/or reunification with one another, open adoption was initially a revolutionary idea that has gradually evolved into greater acceptance (Brokzinsky, 2005).

In addition, the use of open adoptions is becoming evident in some public adoptions in the United States, Canada, and Europe (Brodzinsky, 2005). It is not clear whether this practice is uniformly beneficial to the adoptee. Research shows that adoptive families may curtail the amount of contact with biological families after sustaining contact with them for the first few years (Brooks, Simmel, Barth, & Wind, 2005). However, as noted by David Brodzinsky (2005), open adoption is a "fluid process" and may fluctuate again as children reach the adolescent phase. Yet Brodzinsky remarks that having had an open adoption and maintaining open communication with adopted parents may have a positive developmental influence on adoptees' psychological development in both childhood and adulthood.

## THE FUTURE OF ADOPTION RESEARCH

Within the broad practice of adoption, many different types of adoptive placements exist, affecting infants and children from many different age groups who possess diverse developmental backgrounds and demographic characteristics. To apply a set of research findings to the entire population of adoptees does a disservice to understanding the explicit and subtle differences among them. Whereas recent empirical investigations are beginning to hone in on the specific characteristics of unique types of adoptive arrangements, the next wave of research will be enhanced by taking this a step further. For example, given the potential vulnerability of children adopted from foster care, what are the long-term strengths and challenges faced by these families and can effective services be introduced to mitigate the stressors? For international adoptees, closer examination of the regional differences in how the sending countries care for their young orphans and the ultimate developmental impact of this early care is necessary.

Similarly, on a broader policy level, tighter regulations of independent, for-profit adoption agencies (that may be involved in domestic placements as well) are needed so that the rights of potential adoptive parents and international adoptees are carefully safeguarded. Finally, with respect to the advent of openness in adoption proceedings, how might this process help young adoptees reconcile potential identity issues with their biological heritage? Understanding the immediate (childhood) and long-term (early adulthood) impact of this process is an important step.

**SEE ALSO** Volume 1: *Foster Care; Parent-Child Relationships, Childhood and Adolescence;* Volume 2: *Adoptive Parents; Parent-Child Relationships, Adulthood.*

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***Cassandra Simmel***

## ADOPTION

**SEE** Volume 1: *Adopted Children;* Volume 2: *Adoptive Parents.*

## ADVERSITY, CHILDHOOD

**SEE** Volume 1: *Resilience, Childhood and Adolescence;* Volume 2: *Risk.*

## AFFIRMATIVE ACTION, IMPLICATIONS FOR YOUTH

**SEE** Volume 1: *Policy, Education;* Volume 2: *Policy, Employment; Racism/Race Discrimination.*

# AGE NORMS

The presence of elementary school girls in salons getting facials, men in their 60s starting families, junior high school boys drinking martinis—on some level, these scenarios give one pause. Although there is nothing remarkable about getting a facial, starting a family, or drinking a martini, the *age* of the actors doing these things is just not right. In life course parlance, these behaviors are off-time, either too early or too late. They violate age norms, or shared expectations about when life events, transitions, or behaviors *ought* to occur.

Age is a key factor that organizes social life (Riley, Foner, and Waring, 1988). And the sequence of socially defined, age-graded events and roles that an individual enacts over time is the cornerstone of the life course perspective (Elder, 1975). That is, most individuals in the United States can expect to begin formal education around age 6, complete high school around age 18, transition to marriage in their 20s and early 30s, maintain stable employment during adulthood, retire from the labor force in their 60s, and die thereafter. Although increased heterogeneity in the timing of transitions has occurred over time, this general sequencing is still widespread. Its stability arises from two related processes. First, social institutions (such as the educational system) and institutional transitions (such as retirement) that have age-related boundaries attached play a key role in ensuring the sequence of life events described above. Second, age norms then add onto this institutional role.

This entry focuses on this latter concept of age norms, describing what it means, outlining its appeal and weaknesses, and providing applications of it in research on adolescence. What should be noted up front is that age norms are more often assumed in research than tested directly despite theory that age norms matter during this stage of rapid physical, social, emotional, and cognitive development.

## DEFINING THE CONCEPT

The concept of age norms gained prominence through the work of Bernice Neugarten and colleagues on the Kansas City Studies of Adult Life. Conducted during the late 1950s and early 1960s, the study helped make age research more prominent in sociology, emphasizing the social and psychological elements of age that guide human development. In their seminal article on age norms, Neugarten and colleagues (1965) posited that age norms are a pervasive system of expectations regarding age-appropriate behaviors that lets individuals know when they *should* or *should not* engage in a particular behavior or transition to a new status. These norms, they argued, are embedded into the cultural fabric of everyday life, illustrated in phrases such as "Act your age," "She's too young to be having sex," or "He's too old to be unmarried." Operating at the group level, age norms create social expectations for behavior and provide a social clock or timetable for major life events. As such, individuals are aware both of the social clock and of their own timing relative to others, easily describing themselves as "early," "late," or "on-time" with regard to different transitions and events. Finally, age norms, like all norms, are supported and enforced through a variety of sanctions placed upon the transgressor (Neugarten, Moore, and Lowe, 1965; Settersten and Mayer, 1997).

Using survey responses from a sample of middle-class adults in two Midwestern cities, Neugarten and colleagues found that nearly all agreed that a "right" age for different life transitions exists (e.g., marriage, parenthood, to be settled into a career). For example, more than 85% of respondents thought that the right age for a woman to marry was between ages 19 and 24. From these results, they concluded that the normative pattern of adult development, especially in the 1950s and early 1960s, comes about, in part, as age norms and age expectations "operate as prods and brakes upon behavior, in some instances hastening an event, in others delaying it" (Neugarten et al. 1965, p. 711). This construct and its related ideas (social clock, being off-time, etc.) have been incorporated into a life course perspective, generating a host of studies focused on the significance of age in society and the timing of life events.

## LIMITATIONS OF THE CONCEPT

Although intuitively appealing and a starting point for much life course scholarship, a great deal of conceptual ambiguity, weak measurement, and limited empirical evidence is associated with the concept of age norms (Hagestad, 1990; Elder, 1978; Marini, 1984; Modell, 1997). Using the marriage example from above, when looking at the timing of an event such as age at marriage, are researchers observing an actual norm or simply a statistical regularity? As Marini (1984) noted, an observed behavior that is very common may be a *custom* but not a *norm*, the former referring to a collective expectation of what an individual *will* do and the latter referring to a collective expectation of what an individual *ought* to do. Similarly, in relying on statistical regularities to infer the presence of a norm, one may overlook the possibility that no actual norm exists, but rather a range of behaviors are acceptable. Continuing with the marriage example, looking at union formation behavior among young adults at the start of the 21st century, most are single, neither married nor cohabiting with a partner. Does this statistical regularity mean that to be single is a norm or a behavior that one ought to engage in, whereas to be married or cohabiting is nonnormative? Or, are

***Teens Smoking.*** *Adolescents smoke cigarettes in a café. The image of adolescents engaging in "problem behaviors" such as smoking goes against most age norms.* AP IMAGES.

being married or cohabiting in young adulthood simply other, less common options (Settersten and Mayer, 1997)? Together, these questions limit the scientific utility and application of this concept.

## TWO EXAMPLES OF AGE NORMS IN RESEARCH ON ADOLESCENCE

Despite these limitations, age norms and the consequent social psychological implications of being off-time underlie much of the research on adolescent development. Although the salience of age in human development is waning over time (Neugarten, 1996), some argue that the first two decades of life remain a developmental period where age-grading is more or less consistent (Hagestad, 1990) and, thus, a period where age norms may matter most to development. To that end, three areas of research have been reviewed—moving from the general to the more specific—that build upon or test the role of age norms in adolescent development.

First, much of the research on "problem behaviors" in adolescence (e.g., smoking, drinking, drug use, sexual intercourse) is predicated, in part, on the general belief that engaging in such behaviors in the second decade of life violates the shared expectations of about what an adolescent is—one who is priceless, innocent, and in need of protection—and what behaviors in which she *ought* to engage. That is, smoking is bad for one's health regardless of age, but the image of a smoking 12-year-old *feels* especially egregious. Similarly, the physical and, to some extent, emotional risks associated with sexual intercourse among two consenting 14-year-olds who love and respect one another and use contraception are minimal. Yet most adults, including many academics, and many young people themselves *feel* that such a transition is inappropriate. In both cases, the feelings of inappropriateness triggered by these off-time or early transitions are reflected in public policies (sexual education programs in schools) and law (age restrictions on purchasing cigarettes).

As another example, much of the research on pubertal timing in girls' lives draws on the notion of being off-time as a factor in explaining early-maturing girls' increased likelihood of engaging in problem behaviors (e.g., Ge, Conger, and Elder, 1996; Stattin and Magnusson, 1990). These studies assume that a departure from

the normative developmental schedule is less socially desirable and even stressful for young people (Neugarten, 1979). Because early maturing girls depart from this timetable and are visibly different from their peers at a moment when being like everyone else matters a great deal and because they are perceived by others as older than they really are, early maturers enter the social world of adolescence sooner, doing so with neither the support of their larger peer group nor the development time needed to acquire and integrate the skills needed to confront the new tasks in adolescence.

The final example of the role of age norms in adolescent development comes from a study on race/ethnic differences in age, sequencing norms, and behaviors. Patricia East (1998) used survey data to chart the timing and sequencing of girls' sexual, marital, and birth expectations. She found that the normative timetable by which girls saw their lives unfolding was constructed differently by race and ethnicity. Latinas desired early and rapid transitions for marriage and birth. African-American girls perceived the youngest desired age for first sexual intercourse and the greatest likelihood of nonmarital fertility. Finally, whites perceived older ages for each.

**SEE ALSO** Volume 1: *Drinking, Adolescent; Drug Use, Adolescent; Elder, Glen H., Jr.; Puberty; Sexual Activity, Adolescence; Transition to Marriage; Transition to Parenthood;* Volume 2: *Roles.*

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## AGGRESSION, CHILDHOOD AND ADOLESCENCE

Aggressive behavior among children is recognized as a major risk factor for subsequent developmental maladjustment, both for the perpetrators and the victims. For decades, attempts to understand and prevent childhood aggression have focused on physical aggression. Physical aggression is usually defined as the use of physical force against another person either with an object (e.g., stick, rock, knife) or without (e.g., slap, push, punch, kick, bite). However, increasing press coverage of school-based incidences of peer victimization as well as films such as *Mean Girls* (2004) and books such as *Queen Bees and Wannabes* (2002) have drawn attention to the fact that children's aggressive behavior incorporates more than the infliction of bodily harm. Thus, children can hurt their peers through more subtle forms of aggression, for example through social exclusion or rumor spreading.

Different labels have been used to describe these more subtle forms of aggression, including *indirect aggression*, *relational aggression*, and *social aggression*. All three terms refer to aggressive behavior that is intended to damage another's self-esteem or social status, but indirect aggression is mainly covert in nature (e.g., spreading rumors, social exclusion from the group) whereas relational aggression can be both covert and overt (e.g., threatening to withdraw friendship, divulging secrets). Social aggression encompasses both overt and covert behaviors and also includes nonverbal aggressive behavior (e.g., ignoring someone, negative facial expressions or body movements). A review of the literature reveals, however, that the three labels essentially refer to the same overarching construct. In this entry, the term *social aggression* will be used. Unlike physical aggression, social aggression does not cause any immediate physical injuries. Many adults therefore view social aggression among children as less serious than physical aggression. However, social aggression has been found to activate the same areas of the brain that register physical

pain and is considered by the victims to be as harmful as physical aggression.

## SEX DIFFERENCES IN THE DEVELOPMENTAL COURSE OF AGGRESSION

With the exception of early infancy, when physical aggression first appears, males are considerably more physically aggressive than females throughout the life course. This sex gap in physical aggression gradually widens over the course of childhood and adolescence and reaches a peak in young adulthood. In contrast, girls are already more socially aggressive than boys during the preschool period, when this type of behavior first emerges. The sex gap in social aggression also continuously widens over the course of childhood, with a peak in adolescence, but decreases considerably thereafter. By young adulthood, males and females show relatively similar levels of social aggression (Côté, 2007).

What may explain these divergent trajectories for the two sex groups? One possible explanation refers to differential rates of *cognitive maturation* in infancy between boys and girls. Of particular importance in this context may be the fact that girls develop expressive language skills sooner than boys, which may enable girls to solve conflict situations verbally instead of with physical force and to use socially aggressive strategies that involve the manipulation of others (e.g., rumor spreading). Another explanation may lie in differential *socialization experiences* of the two genders. Several studies show that socializing agents such as parents, teachers, and peers tend to encourage gender-normative behaviors and discourage gender-non-normative behaviors, and this pattern is also found with respect to aggression. Parents and teachers are more likely to disapprove of girls' than of boys' expression of anger and are more likely to use firm directives and follow through on requests for good behavior in girls than in boys. Similarly, peers view physical aggression as less normative for girls than for boys. The differential structure of girls' and boys' peer contexts may also facilitate a greater use of social aggression in girls. Boys tend to engage in more rough-and-tumble play than girls, which may lead to more serious aggressive behavior when conflicts arise. In contrast, girls' play is more oriented toward intimacy and social inclusion within relatively small groups. As a result, girls' peer groups may offer more opportunities for the use of socially aggressive strategies such as rumor spreading or social exclusion than boys' peer groups.

## ETIOLOGY OF PHYSICAL AGGRESSION

For several decades, the prevailing theory of the etiology (or origin) of aggression among scholars was that it is a learned behavior—occurring either as a response to a provocation or threat or as an instrumental means of goal attainment—that results from observing and imitating aggressive role models. Such aggressive role models may be observed either in the family, the peer group, the neighborhood, or in the mass media. Empirical data seemed to support the social learning theory of aggression. Aggression, especially physically aggressive behavior, is more prevalent in children and adolescents who are exposed to marital violence and child abuse, whose parents use harsh discipline and physical punishment, who have highly aggressive siblings or friends, who live in disadvantaged neighborhoods characterized by high crime, and who report frequent exposure to violence in films, music, and print media.

Experimental studies also provided empirical support for observation and imitation of aggressive role models as the primary explanatory mechanism of aggressive behavior. For example, a now classic study by Albert Bandura and colleagues (the "Bobo doll" study) showed that children who observed an adult physically abuse a puppet were more inclined to later use physical aggression themselves against the puppet than children who had not witnessed the adult's aggressive behavior (Bandura, Ross, and Ross, 1961). Empirical support for the idea that aggression is a learned behavior also came from robust criminological statistics showing that arrests for violent offenses (i.e., physical aggression) appear first in preadolescence, increase sharply during adolescence, and decrease slowly thereafter (Sampson and Laub, 1993).

More recently, researchers have challenged the idea that physical aggression is a learned behavior that peaks in adolescence (Tremblay and Nagin, 2005). They argue that, whereas the increase in violent crime during adolescence is in line with a social learning model of aggression, the decrease of violent crime in adulthood is not. Moreover, both observational and questionnaire-based studies suggest that physical aggression (i.e., kicking, biting, hitting, or pushing another person) is already prevalent in toddlerhood. Perhaps even more noteworthy, recent longitudinal studies indicate that physical aggression increases in the first years of life up to a peak at around 30 months of age and then decreases steadily thereafter. These data suggest that, rather than being a result of social learning, physical aggression appears to be part of most—if not all—young children's potential behavioral repertoire. Of course, considerable individual differences exist with respect to the frequency and intensity with which such behavior is enacted. More importantly, over the course of development, most children learn *not* to use physical aggression in interpersonal interaction.

Despite the general decrease in physical aggression after its peak in toddlerhood, recent studies show that up

to 15% of children remain on a stable and high trajectory of physical aggression throughout the preschool years and beyond. What can explain these distinct developmental patterns? At least part of these interindividual differences may be due to genetic factors. A large body of research suggests that at least 50% of the variance in physical aggression during childhood is explained by genetic factors (DiLalla, 2002). There is also evidence, however, that genetic effects on physical aggression diminish with age. Together, these findings suggest that genetic factors may play a considerable role in explaining interindividual differences in children's initial propensity toward physical aggression, whereas socialization may influence to a large extent whether and how quickly children learn to replace physical aggression with socially more acceptable behavior.

## ETIOLOGY OF SOCIAL AGGRESSION

Although most children seem to "unlearn" physical aggression in favor of more socially acceptable alternatives, these alternatives may not necessarily comprise only prosocial behavior. Instead, some children may revert to more covert, socially aggressive strategies to obtain their goals or to seek revenge against others. Unlike physical aggression, social aggression is usually not observed before the preschool period. Given its manipulative and often circuitous nature, social aggression requires a certain amount of verbal skills as well as an understanding of others' intentions and emotions, which only start to emerge at around 4 years of age (Sutton, Smith, and Swettenham, 1999). Once these skills develop, however, some children seem to use social aggression more and more frequently. Thus, whereas physical aggression appears to peak in toddlerhood and (for most children) gradually decline thereafter, social aggression increases with age.

By adolescence, social aggression is by far the predominant type of aggression in social interaction, and remains such thereafter. Indeed, research with adults suggests that psychological harassment, which is equivalent to social aggression, is a major problem in the workplace and one of the main reasons for absenteeism and sick leave. The gradual increase in social aggression over the course of middle childhood and into adolescence suggests that social aggression may be more of a learned behavior than physical aggression. Support for this notion also comes from genetically informative research, which showed that genetic effects only account for only around 20% of the variance of social aggression (Brendgen, Dionne, Girard, Boivin, et al, 2005).

If one type of aggression gradually replaces another, one would expect that it is essentially the same children who first display high levels of physical aggression in infancy and toddlerhood and then high levels of social aggression in middle childhood and adolescence. Findings from cross-sectional studies indeed reveal that many aggressive children use both forms of aggression. Moreover, there is evidence that most children whose social aggression increases from 2 to 8 years of age have displayed moderate to high levels of physical aggression in early childhood. Additional evidence for a common root of physical and social aggression comes from genetically informed research (such as studies of twins), which shows that the two types of aggression are in fact explained by the same genetic factors (Brendgen, et al, 2005).

By the same token, however, this research reveals that physical aggression and social aggression share relatively few environmental predictors after the common genetic factors are taken into account. Together, current research thus suggests that a generalized—and to a significant extent genetically driven—individual disposition for aggressive behavior may shift from physical to social aggression as children mature. Whether and when this shift occurs, however, seems to be determined by the extent to which the child is exposed to social environmental influences that discourage the use of physical aggression and tolerate, or even reward, the use of social aggression.

## ENVIRONMENTAL PREDICTORS AND DEVELOPMENTAL OUTCOMES OF PHYSICAL AND SOCIAL AGGRESSION

The finding that physical aggression and social aggression share relatively few environmental predictors after the common genetic factors are taken into account raises the question what these environmental predictors may be. Empirical evidence suggests that the family context and particularly parental behaviors are among the main environmental predictors of child physical aggression (Loeber and Farrington, 2000). Thus, harsh disciplinary practices toward the child and a lack of warmth have been shown to foster physically aggressive behavior in the child, and these effects are exacerbated in families living in chaotic circumstances characterized by disorder and noise. Notably, these environmental effects are found even when controlling for genetic effects on physical aggression. Children who are exposed to such a stressful family environment at a young age are less likely to learn how to regulate their behavior and more likely to show continuously high levels of physical aggression.

Parental influences on social aggression have been less frequently examined so far. Evidence suggests, however, that one way children may learn socially aggressive behavior is by observing parents' use of manipulative tactics such as love withdrawal or guilt induction—either

toward each other or toward the child (Casas, Weigel, Crick, Ostrov et al., 2006). Parents are not the only source of influence on child behavior, of course, and arguably one of the most important additional influences comes from the peer group. Thus, research shows that affiliation with highly physically aggressive friends may enhance the effect of an existing genetic liability for physical aggression in a child. In contrast, friends' social aggression seems to foster socially aggressive behavior even in children without a genetic predisposition to such behavior. In other words, having highly socially aggressive friends may foster socially aggressive behavior even in children who do not have any preexisting genetic liability for this type of behavior.

Socializing agents such as parents, peers, or teachers may also foster physical or social aggression in the child without even using these behaviors themselves. Social learning theory postulates that a lack of punishment will cause an individual to continue an undesirable behavior that may lead to potential rewards (e.g., obtaining an object or exacting revenge against someone). In line with this notion, a lack of parental monitoring has been related to physical aggression in the offspring. Lack of punishment by socializing agents may play an even greater role in children's use of social aggression. By preschool age, children already believe that socially aggressive responses to provocations are more acceptable than physically aggressive responses. Similarly, parents and teachers tend to view social aggression as less serious than verbal and physical aggression, and they are also less sympathetic to the victims of social aggression. Adults are also much less likely to intervene in instances of social aggression, and if they do intervene, they are less inclined to discipline the socially aggressive perpetrator.

The lack of negative response from the social environment toward the use of social aggression suggests that the developmental outcomes for this type of behavior may differ from those of physical aggression. A plethora of studies have documented the numerous negative consequences of physically aggressive behavior for the perpetrator; these range from problematic relationships with parents, teachers, and the peer group to academic difficulties (low grades, grade retention, high school dropout), as well as later sexual risk behavior (e.g., multiple partners, teen pregnancy) and delinquency (e.g., gang membership, drug use, theft, violence) (Loeber and Farrington, 2000). In addition, there is evidence for a link between physical aggression and internalizing problems (e.g., depression). Do socially aggressive children and adolescents suffer the same fate? Empirical evidence suggests that negative consequences may only occur for individuals displaying extreme levels of social aggression. Specifically, even when accounting for potentially co-occurring physical aggression, children displaying extremely high levels of social aggression are at risk for subsequent delinquency as well as anxiety, depression, and social withdrawal (Crick, Ostrov, and Werner, 2006).

These negative outcomes seem to be even more pronounced for boys than for girls. One possible explanation for this may be that gender non-normative behavior (such as social aggression in boys) may incur more negative reactions from the social environment, which in turn may result in greater adjustment problems in the children displaying gender-non-normative behavior. Social aggression does not seem to be related to negative developmental outcomes in children who display less extreme levels of this type of behavior, however. In fact, some scholars propose that social aggression entails certain benefits for the perpetrator (Werner and Crick, 2004). For example, because social aggression often involves shared contempt and the purposeful exclusion of a third party from a small friendship circle, it may promote cohesiveness and closeness among the perpetrators. Social aggression has also been linked to perceived popularity in the peer group and the receipt of prosocial attention, thus affording the perpetrator a measure of social power over others. The potential for such positive consequences may also explain why, over the course of development, social aggression gradually becomes the predominant type of aggressive behavior for most individuals.

## FUTURE DIRECTIONS IN THE STUDY OF AGGRESSION

Although socialization likely plays a crucial role in explaining the development of aggressive behavior in children and adolescents, the links between a putative environmental variable such as the use of corporal punishment by parents and aggression in the child may reflect the genetic transmission of aggressive behavior. Genetically informative research designs such as twin studies make it possible to estimate the contribution of genetic and environmental factors to the development of aggressive behavior. In addition, the etiological mechanisms linking environmental and genetic influences can be explored. Two relevant etiological mechanisms in this context are a possible *gene-environment interaction* and a *gene-environment correlation* (Moffitt, 2005). A gene-environment interaction is indicated if, for example, the effect of an environmental risk factor such as physical maltreatment on aggression is stronger in children with a greater genetic risk for aggressive behavior. In contrast, a gene-environment correlation reflects a mechanism whereby individuals evoke or select their environment as a function of heritable traits.

These environmental features may then help maintain or exacerbate the child's aggressiveness. For example, a heritable characteristic such as aggression may in turn trigger aggressive responses from the environment, a process referred to as *evocative Gene-Environment correlation*.

Alternatively, an *active Gene-Environment correlation* would be indicated if aggressive children seek out specific social environments, such as peers with similar behavioral characteristics, as a function of their genetic disposition toward this behavior. Studies indeed provide support for gene-environment interaction and gene-environment correlation processes in predicting childhood aggression.

Even genetically informative studies, however, cannot provide proof of the causality of effects between aggressive behavior and putative predictors or outcomes of such behavior. A test of causality can only be achieved through experimental manipulation. In recent decades, however, ethical concerns have been voiced about research involving the direct manipulation of aggressive behavior or its putative antecedents. One innovative way to circumvent these pitfalls may be offered by experimental intervention studies that include both a treatment group and a control group. For example, the causal link between aggression and its putative antecedents can be tested by reducing the hypothesized antecedent risk factor through intervention and by examining whether aggressive behavior also decreases subsequently. With innovative methods and analytical tools such as these, future research will yield an ever better understanding of the etiology of aggression. By the same token, findings from this research will contribute to the optimization of preventive interventions targeting early risk factors (e.g., parenting behaviors) and to the development of school policies targeting context factors (e.g., teacher awareness and classroom management rules) to help stem aggressive behavior in all its forms (Zins, Elias, & Maher, 2007).

**SEE ALSO** Volume 1: *Bullying and Peer Victimization; Genetic Influences, Early Life; Media Effects; Mental Health, Childhood and Adolescence; Peer Groups and Crowds; Socialization; Socialization, Gender; Theories of Deviance.*

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## ALCOHOL USE, ADOLESCENT

**SEE** Volume 1: *Drinking, Adolescent.*

## ANTISOCIAL BEHAVIOR

**SEE** Volume 1: *Aggression, Childhood and Adolescence; Bullying and Peer Victimization; Crime, Criminal Activity in Childhood and Adolescence; Theories of Deviance;* Volume 2: *Crime, Criminal Activity in Adulthood.*

## ASSIMILATION

The question of immigrants' progress lies at the heart of the immigration debate in the early 21st century. Since the mid-1990s, the debate has centered on the question of whether the predominantly non-European immigrants are ever able to assimilate into mainstream American society. Consequently, the matter of immigrant incorporation

generates the most uncertainty and controversy (Zhou & Lee, 2007). The assimilation perspective has dominated much sociological thinking on immigrant adaptation since the turn of the 20th century. Central to this perspective are the assumptions that there is a natural process by which diverse ethnic groups come to share a common culture and gain equal access to the opportunity structure of the host society, that this process entails the gradual abandonment of old-world cultural and behavioral patterns in favor of new ones, and that once, set in motion, this process moves inevitably and irreversibly toward assimilation.

## THE CLASSICAL ASSIMILATION PERSPECTIVE

Classical assimilation scholars generally assume that the host society consists of a single mainstream dominated by a majority group (White Anglo-Saxon Protestants, or WASPs). Migration leads to a situation of the *marginal man* in which ethnic minority groups are pulled toward the host culture but are drawn back by the culture of their origin (Park, 1928; Stonequist, 1937). As time passes, however, diverse ethnic groups from underprivileged backgrounds go through the painful process through a natural race relations cycle of contact, competition, and accommodation as group members abandon their old ways of life to *melt* completely into the host society's mainstream (Park, 1928). These scholars also acknowledge the potency of institutional factors such as family socioeconomic status (SES), phenotypical ranking, and racial/ethnic subsystems in determining the rate of assimilation. In particular, the assimilation of some ethnic minorities is especially problematic because the subordination of those groups often is based on ascribed characteristics, or characteristics one is born with, such as skin color, language of origin, and religion. The process of assimilation of readily identifiable minority groups, especially African Americans, is likely to be confined within racial-caste boundaries, leading to intergroup differences in the pace of assimilation (Warner & Srole, 1945).

Milton Gordon (1964) devised a typology of assimilation to capture the complexity of the process, ranging from cultural, structural, marital, identificational, attitude-receptional, and behavior-receptional assimilation to civic assimilation. In Gordon's view, cultural assimilation, or acculturation, is a necessary first step and is considered the top priority on the agenda of immigrant adjustment but does not lead automatically to other forms of assimilation (e.g., large-scale entrance into the institutions of the host society or intermarriage). In certain circumstances acculturation may take place and continue indefinitely even when no other forms of assimilation occur. Ethnic groups may continue to be distinguished from one another because of spatial isolation and lack of contact, and their full assimilation depends ultimately on the degree to which these groups gain the acceptance of the dominant group in the host society. Structural assimilation, in contrast, is the "keystone of the arch of assimilation" that inevitably leads to other stages of assimilation (Gordon, 1964, p. 81). Although vague about how groups advance from one stage to another and what causes the change, Gordon anticipates that most ethnic groups eventually will lose all their distinctive characteristics and cease to exist as ethnic groups as they pass through different stages of assimilation.

From the classical assimilation perspective, distinctive ethnic traits such as old-world cultures, native languages, and ethnic enclaves are sources of disadvantages. Those disadvantages affect assimilation negatively, but the negative effects are reduced greatly in each of the successive generations because native-born generations use English as the primary means of communication and become more and more similar to the mainstream American population in life skills, manner, and outlook. Although complete acculturation to the dominant culture may not ensure all ethnic groups full social participation in the host society, immigrants are expected to free themselves from their old cultures so that they can begin rising up from marginal positions. Between the 1920s and the 1950s the United States seemed to have absorbed the great waves of immigrants who arrived primarily from Europe. Past sociological studies indicated progressive trends of socioeconomic achievement across immigrant generations and increasing rates of intermarriage as determined by educational attainment, job skills, length of stay since immigration, English proficiency, and levels of exposure to American culture (Alba, 1985; Handlin, 1973; Lieberson & Waters, 1988).

In the 21st century Richard Alba and Victor Nee (2003) revamped the assimilation perspective in *Rethinking the American Mainstream*. They argued that contemporary institutional changes, from civil rights legislation to immigration law, combined with individual incentives and motivation, have reshaped the context of immigrant reception profoundly, making it more favorable for the assimilation of newcomers and their children despite persistent racial discrimination and economic restructuring. Instead of assuming a single, unilateral WASP mainstream into which immigrants are expected to assimilate, Alba and Nee reconceptualized the American mainstream as one that encompasses "a core set of interrelated institutional structures and organizations regulated by rules and practices that weaken, even undermine, the influence of ethnic origins per se" (p. 12). This mainstream may include members of formerly excluded ethnic or racial groups, and it may contain not just the middle class or affluent suburbanites but the working class or the central-city poor. Individual experiences of intergenerational mobility among immigrants are thus not dissimilar to those in the mainstream.

Upward, horizontal, or downward social mobility is possible for immigrants and their children as much as it is for those in mainstream society.

However, according to Alba and Nee (2003), the process of assimilation varies from individual to individual and from group to group, depending on two causal mechanisms. The first is a set of proximate causes that involve an individual's or group's purposive action and social networks (particularly exchange mechanisms of social rewards and punishments within a primary group and community) and the forms of capital (human, social, and financial) an individual or group possesses. The second is a set of distal causes that are embedded in larger social structures such as the state and the labor market. Alba and Nee suggest that all immigrants and their descendants eventually assimilate, but not necessarily in a single direction as predicted by the classical theory. They believe that "an expectation of universal upward mobility for any large group is unrealistic" (p. 163). This theoretical framework helps explain how immigrants, particularly those of non-European origin and working-class background, incorporate into the mainstream at different rates and by different measures. Despite their definition of the mainstream as inclusive, however, their notion of successful assimilation explicitly refers to incorporation into the middle class, not the working or lower class (Zhou & Lee, 2007).

## ANOMALIES

Since the late 1960s the classical assimilation perspective and its application to more recently arrived non-European immigrant groups has been challenged. Instead of eventual convergence into the middle-class mainstream as predicted by assimilation theories, several anomalies appear to be significant. The first concerns persistent ethnic differences across generations. Classical theories predict assimilation as a function of the length of U.S. residence and the number of succeeding generations, but this is not how it seems to work. Prior research has revealed an opposite pattern: the longer the U.S. residence, the more maladaptive the outcomes, whether measured in terms of school performance, aspirations, or behavior (Portes & Rumbaut, 2001; Suárez-Orozco & Suárez-Orozco, 2001; Telles & Ortiz, 2007). Moreover, even small differences in parental educational and occupational status result in substantial differences in children's educational and occupational mobility. In a study of the Irish, Italian, Jewish, and African Americans, for example, Joel Perlmann (1988) showed that even with family background factors held constant, ethnic differences in levels of schooling and economic attainment persisted in the second generation and later generations and that schooling was not equally commensurate with occupational advancement for African Americans compared with European Americans across generations.

Another anomaly is what Herbert Gans (1992) describes as the second generation decline. Gans notes three possible scenarios for the contemporary new second generation: education-driven mobility, succession-driven mobility, and niche improvement. He observes that immigrant children from less advantaged socioeconomic backgrounds had a much harder time than other middle-class children succeeding in school and that a significant number of the children of poor, especially dark-skinned poor, immigrants had multiple risks of being trapped in permanent poverty in an era of stagnant economic growth and in the process of Americanization because these immigrant children "will either not be asked, or will be reluctant, to work at immigrant wages and hours as their parents did but will lack job opportunities, skills and connections to do better" (pp. 173–174). Gans anticipated downward mobility for many immigrants, including some of those from middle-class backgrounds, and dismal prospects for children of the less fortunate who must confront high rates of unemployment, crime, alcoholism, drug use, and other pathologies associated with poverty and the frustration of rising expectations.

Still another anomaly relates to the counterintuitive phenomena associated with contemporary immigration. In the fastest-growing knowledge-intensive industries in the United States, foreign-born engineers and other highly skilled professionals disproportionately take key technical positions and even ownership positions, such as Chinese and Indian immigrants in Silicon Valley. Highly skilled and economically resourceful immigrants appear to skip several rungs on the mobility ladder and bypass the conventional enclave-to-suburbia route immediately upon arrival. In immigrant enclaves, ethnic commercial banks, corporate-owned expensive restaurants, and chain supermarkets stand side by side with traditional rotating credit associations, coffee and tea houses, and mom-and-pop stores, opening alternative paths to social mobility without the loss of ethnic distinctiveness (Zhou, 1992).

In urban public schools neither valedictorians nor delinquents are atypical among immigrant children regardless of timing and racial or socioeconomic backgrounds (Zhou & Bankston, 1998). Although immigrant children are overrepresented on lists of award winners and in academic fast tracks, many others are vulnerable to multiple high-risk behaviors, school failure, membership in street gangs, and youth crime. Even Asian Americans, the so-called model minority, have seen a steady rise in youth gang membership. Some Asian gang members are from suburban middle-class families, attend magnet schools, and are good students. Some of the notorious

Asian gangs include the Flying Dragons, the Fuk Ching, the Viet Ching, and the Korean Power. These anomalies indicate a significant gap between theory and reality.

## SEGMENTED ASSIMILATION

Segmented assimilation as a middle-range theory emerged in the early 1990s with the 1993 publication of "The New Second Generation" by Alejandro Portes and Min Zhou in the *Annals of the American Academy of Political and Social Sciences.* The theory is built on the empirical observations that the host society is highly stratified by class and race/ethnicity, that immigrant social mobility is contingent on ethnic specificities and structural circumstances, and that immigrants arrive with different amounts and kinds of resources to cope with resettlement and socioeconomic incorporation.

Unlike classical assimilation theories that posit an irreversible and unidirectional path leading to eventual incorporation into an undifferentiated, unified, and white middle-class mainstream by all immigrants, the segmented assimilation theory conceives of the mainstream society as being shaped by systems of class and racial stratifications. It emphasizes the interaction between race/ethnicity and class and between group membership and larger social structures that intentionally or unintentionally exclude non-whites. It attempts to delineate the multiple modes of incorporation that emerge among contemporary immigrants and their offspring, account for their different destinies of convergence (or divergence) in the new homeland, and addresses the ways in which particular contexts of exit and reception of national-origin groups affect outcomes.

From this perspective, the process of assimilation may take multiple pathways, sometimes with different turns leading to varied outcomes. Three main patterns are discernible. The first is the time-honored upward mobility pattern dictating acculturation and economic integration into the normative structures of mainstream middle-class America. This is the old-fashioned path of severing ethnic ties; unlearning old-world values, norms, and behavioral patterns; and adapting to the WASP core associated with the middle class. The second pathway is the downward mobility pattern that dictates acculturation

***Pledge of Allegiance.*** *An integrated classroom recites the Pledge of Allegiance.* © BETTMANN/CORBIS.

and parallel integration into the margins of American society. This is the path of adapting to native subcultures in direct opposition to the WASP core culture or creating hybrid oppositional subcultures associated with native groups trapped in the margins of the host society or the bottom rungs of the mobility ladder. The third pathway is socioeconomic integration into mainstream American society with lagged and selective acculturation and deliberate preservation of the values and norms, social ties, and ethnic institutions of the immigrant community. This is the path of deliberately reaffirming ethnicity and rebuilding ethnic networks and structures for socioeconomic advancement into middle-class status.

The segment of society into which an immigrant or ethnic group assimilates is determined by the unique contexts of exit and reception. The context of exit entails a number of factors, including the premigration resources that immigrants bring with them (e.g., money, knowledge, and job skills), the social class status already attained by immigrants in their homelands, motivations, and the means of migration. The context of reception includes the positioning of the national-origin group in the system of racial stratification, government policies, labor market conditions, and public attitudes and the strength and viability of the ethnic community in the host society. Segmented assimilation theory focuses on the interaction of these two sets of factors, predicting that particular contexts of exit and reception can create distinctive cultural patterns and strategies of adaptation, social environments, and tangible resources for the group and give rise to opportunities or constraints for the individual independent of individual socioeconomic and demographic characteristics.

Whereas the unique contexts of exit and reception lead to distinct modes of incorporation for immigrant and refugee groups, different modes of incorporation explain variations in the contexts in which individuals strive to "make it" in their new homeland. For example, to explain why immigrant Chinese or Korean children generally do better in school than do immigrant Mexican or Central American children even when they come from families with similar income levels, live in the same neighborhood, and go to the same school, one must look to the unique contexts in which those children grow up. Among the various contextual factors that may influence academic outcomes, one stands out among Chinese and Koreans: an ethnic community with an extensive system of supplementary education, including nonprofit ethnic language schools and private institutions for academic tutoring, enrichment, standardized test drills, college preparation and counseling, and extracurricular activities aiming mainly at enhancing the competitiveness of children's prospects for higher education. The ethnic system of supplementary education is built not only on the strong human capital and financial resources that Chinese and Korean immigrants brought with them to the new country but also on their experience with a competitive educational system in the homeland (Zhou & Kim, 2006). Mexican and Central American communities lack similar ethnic social structures that generate resources conducive to education. Moreover, the children of Mexican and Central American immigrants who live in the same neighborhoods as Chinese and Korean immigrants largely are excluded from these ethnic resources.

Empirically, segmented assimilation is measured by a range of observable socioeconomic indicators, such as educational attainment, employment status, income, and home ownership. For the children of immigrants indicators of downward assimilation include dropping out of school, having children early, and being arrested or sentenced for a crime, for these variables are strong predictors of future low educational attainment, occupational status, income, and likelihood of home ownership. Numerous qualitative and quantitative works have produced evidence that supports segmented assimilation predictions that the second generation is likely to assimilate upwardly, downwardly, or horizontally into an American society that is highly segmented by class and race and to do so in different ways.

From the segmented assimilation perspective, downward assimilation is only one of several possible outcomes. Curiously, the segmented assimilation theory often is misinterpreted as suggesting and predicting a single outcome—downward assimilation—and therefore criticized for being pessimistic about the immigrant second generation. Nonetheless, to refute the segmented assimilation theory or state that the second generation will move into the mainstream middle class sooner or later, one must demonstrate that both of the following cases are false: the proportions of those falling into the major indicators of downward assimilation—high school dropouts, teenage pregnancies, and arrests for breaking the law—are insignificant for each national-origin or ethnic group and that the differences in outcomes are randomly distributed across different national-origin or ethnic groups regardless of the modes of incorporation of those groups. Despite the fact that the majority of the second generation in the early 21st century is likely to follow the path of upward social mobility taken by the children and grandchildren of earlier immigrant waves, those who are at high risk of falling through the cracks leading to downward assimilation would need external supports, such as quality schools, language assistance, after-school programs, and organized youth leadership activities from the local community and the state.

**SEE ALSO** Volume 1: *Bilingual Education; Immigration, Childhood and Adolescence; Oppositional Culture; Racial Inequality in Education; Socialization, Race.*

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***Min Zhou***

# ATTACHMENT THEORY

Close relationships are central to individuals' physical and emotional well-being, and attachment theory has been a central framework that researchers have used to study close relationships. Although most attachment research has attempted to elucidate the infant-mother relationship, attachment has been conceptualized as a life course phenomenon that "plays a vital role ... from the cradle to the grave" (Bowlby, 1969, p. 208). Accordingly, attachment theory and research have expanded to reflect the life course focus and illuminate attachment-related processes and sequelae during the preschool years, middle childhood, adolescence, and adulthood. The publication of *Handbook of Attachment* in 1999 (Cassidy & Shaver, 1999) and the publication of a revised and updated second edition in 2008 are testimony to the growth and breadth of attachment theory and research since its emergence in the 1960s and 1970s.

## BOWLBY'S THEORY OF ATTACHMENT

While working at a school for maladjusted children and training as a child psychiatrist at the British Psychoanalytic Institute, John Bowlby developed a conviction that a child's early experiences in the family, especially with the mother, are fundamental to psychological development and well-being. This view was in sharp contrast to the psychoanalytic theory of the time, which discounted experience and emphasized inner fantasy as the root of emotional disturbance.

In gathering evidence about the role of early experience, Bowlby focused on maternal separation and loss, and his first published paper, "Forty-Four Juvenile Thieves: Their Characters and Home Life" (1944), showed how the absence of a consistent caregiver was associated with later delinquency. In 1951, in response to an invitation from the World Health Organization (WHO) to report on the mental health of homeless children, Bowlby published *Maternal Care and Mental Health,* which underscored his major premise about the centrality of a continuous and warm relationship with the mother (or "mother substitute") for a child's psychological well-being and the negative consequences of maternal deprivation (e.g., prolonged separation). However, questions about how and why maternal deprivation is so disruptive remained unanswered in the WHO report. Bowlby developed his ideas further and explicated his theory of attachment in the three-volume work *Attachment and Loss* (Bowlby, 1969, 1973, 1980). Drawing on theory and research in psychoanalysis, evolutionary biology, ethology, cognitive development, and control systems theory, Bowlby posited that attachment serves the biological function of protection by maintaining contact between the caregiver and the infant. From an evolutionary perspective such maintenance of proximity ultimately aids in the survival of the species.

Bowlby (1969) delineated three hierarchically organized components of attachment. Attachment behaviors

(e.g., crying, smiling, approaching) maintain proximity to the caregiver. Those behaviors are organized within the individual into an attachment behavioral system whose goal is maintenance of proximity to the caregiver; the goal of the attached individual is felt security. The concept of a behavioral system is rooted in control systems theory, and the system is analogous to a thermostat in that it regulates the proximity between the infant and the caregiver as circumstances vary in the environment (e.g., threats, location of caregiver) and the infant (e.g., tired, sick).

The attachment system is one of multiple behavioral systems and complements the child's exploratory system. That is, whereas the attachment figure provides comfort in times of stress, that figure also acts as a "secure base" from which the child may explore the environment in nonthreatening and relatively stress-free situations. The attachment bond is the tie that an infant has to his or her caregiver. In contrast to attachment behaviors, which are situational, an attachment bond exists over time and does not depend only on the presence of attachment behaviors.

Bowlby's theory of attachment has proved to be an effective perspective from which to examine children's socioemotional development, and his discussion of the internal working model provided a new way to conceptualize continuity in development. The internal working model is described as a mental representation of an infant's relationship with his or her attachment figure, which is constructed continuously as the infant interacts with the environment (Bowlby, 1969, 1973). This internal representation of the parent-child attachment relationship provides the mechanism of continuity between the quality of children's early relationships with parents and their later socioemotional adjustment. Attachment theory posits that a child carries the internal working model of the parent-infant relationship forward into his or her close relationships with others. Central to carrying forward the attachment relationship is the child's need to maintain a coherent sense of self, and in doing that the child may behave in a way that evokes the same treatment in later relationships that has occurred within his or her early attachment relationships (Sroufe & Fleeson, 1986).

## PATTERNS OF INFANT-MOTHER ATTACHMENT

Bowlby's theory of attachment put forth groundbreaking notions regarding the mother-infant bond, but it was the pioneering work of Mary Salter Ainsworth that led to a proliferation of attachment research that continues in the early 21st century. Ainsworth joined Bowlby's research unit at the Tavistock Clinic in London from 1951 to 1954, a time when Bowlby was constructing his theory of attachment. Influenced by Bowlby's thinking and the ethological methods employed in his laboratory, Ainsworth went on to conduct two studies—the first in Uganda and the second in Baltimore, Maryland—that employed detailed naturalistic observations of mothers and infants. Those studies provided some of the first empirical evidence of Bowlby's conceptualization of infant-mother attachment. Moreover, the development and validation of the Strange Situation among the 26 mother-infant pairs in the Baltimore study (Ainsworth & Wittig, 1969; Ainsworth, Blehar, Waters, & Wall, 1978) was a critical methodological contribution that gave researchers an empirical method to test the tenets of attachment theory.

The Strange Situation is a laboratory-based paradigm designed to heighten an infant's attachment behavioral system and typically is administered to infants between 12 and 18 months of age. During the eight episodes of the Strange Situation, which occur over the course of approximately 20 minutes, the infant is exposed to increasing, although moderate, levels of stress (e.g., interaction with a strange adult, separation from the mother). From observations of infant behavior during the Strange Situation, especially behavior during two reunion episodes with the mother, Aisnworth and her colleagues (1978) derived three classifications of infant attachment: secure (type B), insecure-avoidant (type A), and insecure-resistant (type C).

In normative U.S. samples approximately 65% of infants are classified as secure, 20% as avoidant, and 15% as resistant (van Ijzendoorn & Kroonenberg, 1988). Infants classified as secure tend to seek out the mother in the reunion episodes of the Strange Situation and appear happy to see her return. If distressed during a separation, the infant is able to be comforted by the mother during the reunion. Infants classified as avoidant tend to demonstrate lower levels of distress during separations and greater avoidance of the mother (e.g., turning away, ignoring) during reunions. Infants classified as insecure-resistant become highly distressed during separations from the mother, yet in the reunion episodes they have difficulty being comforted by the mother. Their behavior may alternate between seeking contact and angrily pulling away from or resisting contact with the mother.

Ainsworth and her colleagues (1978) showed that the attachment patterns that emerged in the Strange Situation at 12 months of age were related to patterns of mother-infant interaction assessed in extensive home observations (approximately 72 hours per family) during the first year of life. That is, an infant's behavior in the Strange Situation seemed to reflect his or her prior experience and current expectations of the mother's responsiveness and availability. Ainsworth and her

colleagues (1978) showed that mothers of infants classified as secure tended to be sensitive to the infant's needs during everyday interactions in the home and responded to the infant's distress in an appropriate, timely, and sensitive fashion. When confronted with the moderate stress of the Strange Situation, those infants' behavior (e.g., happy to see mother return, approach mother if distressed) seemed to reflect an expectation that the mother would be available and effective in responding to signals of distress and the need for proximity. In contrast, mothers of insecure-avoidant infants tended actively to reject the infants' signals of distress and attempts to maintain proximity, especially close physical contact, and those infants minimized displays of distress in the Strange Situation as a strategy to maintain proximity to the mother. Mothers of insecure-resistant infants tended to be inconsistently responsive to the infants' distress, and those infants heightened their attachment behavior in the Strange Situation as a way to maintain proximity. This correspondence between Ainsworth's intensive naturalistic observations in the home and infant behavior in the brief laboratory episodes makes the Strange Situation a powerful methodological tool.

Some infants demonstrate both avoidance and resistance or odd behaviors (e.g., repetitive rocking) in the Strange Situation and do not fall clearly into one of the three attachment classifications described above. In investigating these unclassifiable infants, Mary Main and colleagues (Main & Solomon, 1990; Main & Weston, 1981) developed a fourth attachment classification (disorganized/disoriented; type D) that reflects the lack of a coherent attachment strategy. Infants in high-risk populations (e.g., exposure to maltreatment, parental psychopathology) have been overrepresented in the disorganized classification.

## ANTECEDENTS OF INFANT-MOTHER ATTACHMENT

Since the 1978 Baltimore study of Ainsworth and colleagues hundreds of researchers have examined maternal behavior, particularly sensitivity, as an antecedent of infant-mother attachment security as it is assessed in the Strange Situation. In a meta-analysis of 66 studies, De Wolff and van IJzendoorn (1997) reported that the sensitivity-security association was significant yet modest (i.e., 0.24). The modest extent of that association may be due in part to the use of global ratings of maternal sensitivity in low-stress situations (e.g., play). In line with Bowlby's (1969) emphasis on attachment as a biobehavioral system of protection, some have argued that sensitivity to infant distress is paramount to the formation of a secure attachment (Goldberg, Grusec, & Jenkins, 1999; Thompson, 1998), and in one study sensitivity to infant distress versus nondistress at age 6 months predicted infant-mother attachment security at age 15 months (McElwain & Booth-LaForce, 2006).

Complementing correlational evidence of sensitivity-security associations, intervention studies have provided support for sensitivity as a causal factor in the development of a secure infant-mother attachment (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003). For instance, in a low-income sample of 100 Dutch infants who were high in irritability at birth, a brief intervention aimed at fostering maternal reading of infant cues and sensitive responsiveness was administered between 6 and 9 months to half the sample. The results indicated that infants in the intervention group were more likely to receive secure attachment classification at the end of the first year (68% versus 28%) (van den Boom, 1994).

Although maternal sensitivity is important, it is not the only potential antecedent of a secure attachment. Child characteristics also must be considered, and the role of child temperament in particular has elicited debate. Critics of attachment theory argue that security as assessed in the Strange Situation simply may reflect individual differences in child temperament. However, evidence of a direct temperament-security association has been mixed, and intervention studies such as the one by D. C. van den Boom (1994) provide strong counter-evidence of a direct effect of temperament. That is, even in infants high in irritability, intervention efforts to bolster maternal sensitivity increased the chances of a secure attachment. In contrast, a high rate of insecure attachment (72%) was found in the control group, and the combination of infant irritability and low family income that characterized this sample might have impeded sensitive responsiveness among the mothers in the control group. More complex models of the way child temperament interacts with risk or protective factors to predict attachment security are needed.

The mother-infant dyad is situated in a larger context. From an ecological perspective, the quality of the marital relationship, levels of nonspousal social support, and maternal psychological well-being are factors that may affect the infant-mother attachment relationship directly or indirectly (Belsky, 1999). Attention also has been paid to the effect of maternal employment on infant-mother attachment. In contrast to Bowlby's focus on prolonged and chaotic separations, separations experienced by children in day care tend to be brief and routine. Nonetheless, because of the large number of U.S. infants who experience nonmaternal care, investigating its effect on attachment is essential.

The NICHD Study of Early Child Care launched in 1991 is the most comprehensive study to date of this question. The participants were 1,364 children and their

families from 10 sites across the United States, and an array of assessments in home, laboratory, and day care settings were conducted beginning at one month of age. The findings indicated that maternal sensitivity and responsiveness predicted attachment security at 15 months, whereas child care variables (hours, onset, and quality) did not (NICHD Early Child Care Research Network, 1997). Child care variables, however, interacted with maternal sensitivity so that infants who experienced lower-quality child care, more hours per week in care, or more changes in care in combination with low maternal sensitivity had a higher likelihood of insecure attachment.

## SEQUELAE OF INFANT-MOTHER ATTACHMENT

In line with the tenet of attachment theory that early attachment relationships influence children's subsequent functioning, a second major area of attachment research has focused on the sequelae of attachment. In the process infant-mother attachment has been related to a host of outcomes, including social competence, peer acceptance and status, friendship quality, and behavioral problems. However, there is a range of views about how much attachment theory should be expected to predict (Belsky & Cassidy, 1994; Thompson, 1998). A narrow view suggests that because attachment between the mother and the infant is a close, intimate relationship, early attachment should be related to the subsequent quality of the mother-child relationship as well as the child's mode of relating in other close, intimate relationships. A broader view posits that attachment should be related to children's interpersonal interactions with others more generally (e.g., sociability, empathy). An even broader view asserts that attachment provides a basic foundation for later development in multiple domains, including personality, cognition, and language.

Both quantitative and qualitative reviews seem to concur with a more narrow view of attachment (Belsky & Cassidy, 1994; Schneider, Atkinson, & Tardiff, 2001; Thompson, 1998; van IJzendoorn, Dijkstra, & Bus, 1995). Associations with early attachment seem to be most consistent when outcomes include indices of the mother-child relationship or the child's relationships with close others (e.g., friends), although even those associations tend to be modest. Less consistent and weaker associations emerge between early attachment and children's more general social competencies, interactions with unfamiliar others, and cognitive abilities.

In extending and refining predictions about the sequelae of attachment, the next generation of research should attempt to identify processes by which early attachment exerts an influence on later functioning. In light of Bowlby's notion of the internal working model and others' extensions of his theory, children's processing of social information (Main, Kaplan, & Cassidy, 1985), mentalistic understanding of others (Fonagy & Target, 1997), and regulation of emotion (Cassidy, 1994) appear to be prime candidates for potential intervening mechanisms. Furthermore, most research has examined secure-insecure differences on child outcomes because of the relatively low numbers of children in each of the insecure groups (avoidant, resistant, disorganized). However, as described above, the different insecure groups experience different patterns of caregiving, and when examined separately, children in the avoidant and resistant groups exhibit distinct behavioral and psychological outcomes. Thus, detection of attachment-related differences may be hindered by combining children into one "insecure" group. Future research should continue to illuminate the differential sequelae of the insecure groups.

## BEYOND MOTHERS

Infants typically develop attachment bonds with multiple caregivers, although the primary caregiver is usually the preferred attachment figure during times of stress. Research on infant attachment to fathers, day care providers, and teachers has provided a needed addition to the study of the mother-infant dyad (Belsky, 1999). In light of the increasing time fathers are spending in the caregiving role in recent years, a better understanding of the antecedents and sequelae of infant-father attachment is an important direction for further inquiry. Relatedly, attachment figures during infancy and childhood are most often parents and other adult caregivers, yet during adolescence and adulthood close friends and romantic partners may become central (Hazan & Shaver, 1994). As attachment research and theory move beyond the mother-child dyad, important considerations arise regarding the integration and organization of working models across partners and time, concordance versus discordance of attachment security with multiple attachment figures, and the joint contributions of multiple attachments for interpersonal functioning across the life course.

## BEYOND INFANCY

Although theory and research have focused on attachment during infancy as measured through the use of the Strange Situation, Bowlby conceptualized attachment as a lifelong phenomenon; accordingly, attachment research beyond infancy has burgeoned. Age-appropriate measures of attachment have been developed and include modified Strange Situation procedures and observations of secure base behavior in the home using a Q-sort methodology for preschool- and school-age children as

well as self-report and narrative measures for children, adolescents, and adults. After Ainsworth's Strange Situation, the most extensively used and validated attachment measure is the Adult Attachment Interview (AAI) developed by Main and colleagues (Main et al., 1985). The AAI is a semistructured interview in which adult respondents are asked about childhood experiences. Labor-intensive coding of interview transcripts involves assessing attachment classifications in a way that is based not on the content of the responses (what happened in the individual's childhood) but on their coherence (responses are truthful, relevant, and succinct). In this regard, the AAI attempts to capture the adult's state of mind with respect to attachment. Paralleling the infant classificatory system, the AAI classifications include autonomous (secure), dismissing (avoidant), preoccupied or enmeshed (resistant), and unresolved (disorganized).

With the development of attachment assessments beyond infancy, it has been possible to examine the continuity of attachment patterns across time and, if discontinuity is detected, whether intervening events account for change (i.e., lawful discontinuity). Attachment theory posits that primary attachment relationships become consolidated during the first 5 years of life, and although children are open to new experience, they become resistant to change later in development unless there has been a major change in the environment (Bolwby, 1969). Evidence for continuity, however, is mixed (Thompson, 1998; Waters, Hamilton, & Weinfield, 2000). For instance, among long-term longitudinal studies, stability in attachment assessed in infancy by means of the Strange Situation and in late adolescence or young adulthood by means of the AAI has shown high stability in two studies (64–77%) but low stability in two others (39–51%). Importantly, however, in several of these long-term studies instability of attachment appears to be lawful in some cases in that intervening life events (e.g., parental mental illness, child maltreatment) predict change in attachment status from infancy to adulthood (Waters et al., 2000).

In keeping with infant research on attachment patterns, investigations of attachment beyond infancy have focused primarily on individual differences. Although this focus has been productive, explication of development beyond infancy is needed. According to Bowlby (1969), development of attachment occurs early in life, and the last stage—the "goal-corrected partnership"—emerges by age five. Some attachment theorists suggest, however, that the preschool and adolescent years, with their rapid advances in neurological and cognitive capacities, may be especially fruitful periods for considering qualitative change in the attachment behavioral system and related representations (Crittenden, 2000; Thompson, 1998). In this regard, delineating developmental changes in and reorganization of the internal working model as individuals move through the life course will be essential. Although important in its own right, further theorizing about developmental change in attachment also will move methodological assessment of attachment forward in important ways.

Attachment theory and research have emerged as the central framework for understanding close relationships across the life course. Research spurred by attachment theory spans infancy to adulthood, children and families from a diverse array of cultures, and biological, cognitive, and emotional processes. Perhaps most important, Bowlby's theory of attachment originated from his observations of children struggling in real-world circumstances. Fittingly, the decades of research that followed Bowlby's and Ainsworth's work are being utilized to make recommendations and consider implications for clinical practice, intervention, and policy (Berlin, Ziv, Amaya-Jackson, & Greenberg, 2005; Oppenheim & Goldsmith, 2007).

**SEE ALSO** Volume 1: *Bowlby, John; Child Care and Early Education; Dating and Romantic Relationships, Childhood and Adolescence; Family and Household Structure, Childhood and Adolescence; Maternal Employment; Parent-Child Relationships, Childhood and Adolescence; Parenting Style; Poverty, Childhood and Adolescence;* Volume 2: *Dating and Romantic Relationships, Adulthood.*

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## ATTENTION DEFICIT/ HYPERACTIVITY DISORDER (ADHD)

According to the *Diagnostic and Statistical Manual* (fourth edition, text revision [*DSM–IV–TR*]; 2000), Attention deficit hyperactivity disorder (ADHD) is characterized by a pervasive and persistent lack of attention and/or heightened activity level. Children with ADHD are defined as quantifiably distinct from their peers as they have problems paying attention, staying on task, and remaining sedentary. These particular behavioral patterns are especially problematic in the school setting as children displaying ADHD traits produce work that is disorganized and incomplete and they are easily distracted by extraneous stimuli. Symptoms of hyperactivity include fidgeting, squirming in one's seat, talking excessively, and/or acting as though one is driven by a motor (American Psychiatric Association [APA], 2000).

ADHD diagnoses have risen steadily since the 1970s in the United States, yet many other countries report little, if any, ADHD among child and adolescent populations (Breggin, 2002). Historically speaking, ADHD is a relatively new phenomenon, and although millions of American children now carry the ADHD label, this was not always the case. In the 1950s, ADHD did not exist in the United States. In the 1970s, an estimated 2,000 American children (the vast majority of whom were boys) were diagnosed as "hyperactive" and the standard method of treatment was behavior-modification therapies. In 2003

the Centers for Disease Control and Prevention reported approximately 4.4 million American children had been diagnosed with ADHD (again, the majority are boys), and the accepted method of treatment was daily doses of Methylphenidate (MPH), often referred to by the brand name of Ritalin (Breggin, 2002; Stolzer, 2005).

Although it is accurate to report that ADHD diagnoses are increasing in many westernized countries, scholars have pointed out that 80 to 90% of MPH produced worldwide is prescribed for American children in order to control behaviors that have just recently been classified as pathological (Leo, 2000). Relatively recently, typical childhood behaviors such as not paying attention and being physically active in confined classrooms has been classified by the *DSM–IV–TR* as a verifiable mental disorder. According to the *DSM–IV–TR* (APA, 2000), symptoms of ADHD include "fidgeting," "running or climbing excessively," "often has difficulty playing quietly," and "often fails to give close attention to details or makes careless mistakes in schoolwork." Symptoms must be present in two or more settings (e.g., home, school, or various social settings), although it is unlikely that the child will display the same level of dysfunction in all settings as symptoms typically worsen in environments that require "monotonous" and "repetitive" tasks (p. 86). Conversely, ADHD symptoms are minimal (or absent) when the child is receiving positive reinforcement, is under close supervision, is in an interesting environment, and/or is engaged in an activity that they find enjoyable. Typically, symptoms of ADHD are present before the age of 7 (APA, 2000).

## SCIENCE BEHIND THE FINDINGS

Scholars have suggested that the *DSM*'s diagnostic criteria have serious scientific flaws. Fred Baughman (2006) asked: At what point does hyperactivity become "persistent"? How does one tell the difference between "normal" childhood behavior and pathology? Baughman also asked: What is "typical"? typical for a particular classroom? a particular geographical location? or perhaps a particular culture? Also, the *DSM–IV–TR* does not in any way control for gender differences in behavior patterns—differences that can be quantified across cultures, across historical time, and across mammalian species (Bjorklund & Pellegrini, 2002; Stolzer, 2005).

As is the case with all psychiatric disorders, members of the APA vote on which disorders meet the criteria for inclusion in the latest *DSM*. "The Purpose of the *DSM* is to provide clear descriptions of diagnostic categories in order to enable clinicians and investigators to diagnose, communicate about, study, and treat people with various mental disorders" (APA, 2000, p. xxxvii). It is interesting to note that homosexuality was for many years defined as a psychiatric disorder by the APA and, as such, was included in the *DSM* until 1978. Defining homosexuality as a mental disorder clearly illustrates the subjective nature of the *DSM* and clarifies that perceptions of what constitutes a legitimate mental disorder can change over time. Despite the combined efforts by the APA and the pharmaceutical industry, which both actively promote ADHD as a neurologically based brain disorder, there exists no scientific evidence to substantiate this claim (Baughman, 2006; Breggin, 2002). No neurological or metabolic tests are performed to confirm the existence of ADHD. Rather, diagnostic testing typically follows a prescribed pattern:

1. The child is having difficulty in school;
2. The parents are called in for a conference and are informed that in order to get the child the help he/she needs, a formal assessment must be conducted;
3. The formal ADHD assessment is done using a standardized checklist of behaviors for the specified child;
4. The child is then referred to a physician (most often to a general practitioner);
5. The physician relies on a standardized ADHD behavior checklist, and if the child exhibits six out of nine of the ADHD behavior patterns, he/she is formally diagnosed with ADHD;
6. Psychotropic medication is the prescribed treatment plan.

Many scientists have actively refuted the reliability and validity of current ADHD assessment procedures (Baughman, 2006; Carey, 2002; Stolzer, 2007). According to published research, ADHD assessment tests are highly subjective and vary tremendously from one rater to the next (Carey, 2002). The answers contained on the assessment tests are limited to *never, rarely, sometimes, often*, and *always*. Scientifically speaking, these are not operationally defined terms and clearly carry multiple meanings depending on the perceptions of a specific rater. At the present time, these terms are not universally quantified, and this fact most certainly decreases both the reliability and validity of the ADHD diagnostic process (Breggin, 2002; Carey, 2002). Other scholars have suggested that the status of the rater (e.g., the teacher, parent, or physician) is not considered in the course of assessment. Tolerance level, understanding of normative developmental processes, gender, age, personality type, education, and cultural background are variables that heavily influence rater perception, yet these variables are not controlled for in any quantifiable way (Carey, 2002; Stolzer, 2007).

## ECONOMIC CONTEXT

Any discussion of ADHD must address the economic context surrounding this disorder. In 1975, Americans enacted legislation (often referred to as the Mainstreaming Act) that allowed children with physical disabilities access to the public school system. In 1991, children with behavioral and/or learning disabilities were included in this amendment, and since that time, ADHD diagnoses have skyrocketed across America (albeit this is not the situation in other countries). Under the 1991 American amendment, schools that enroll students with disorders such as ADHD receive federal funding. That is, the more children who are diagnosed with behavioral disorders, the more money the individual school receives. It is also interesting to note the disparities that exist with regard to ADHD rates among American students. Private American schools receive no federal money for children diagnosed with ADHD and typically have extremely low rates of ADHD among their student populations. Conversely, public schools receive federal money for each child diagnosed, and the rates of ADHD among public school students are as high as 60% in some American school districts (Baughman, 2006).

## GENDERED AND DEVELOPMENTAL INFLUENCES

Throughout human history, males and females have followed very different developmental trajectories. According to Peter Jensen and colleagues (1997), males evolved in an environment that required elevated activity levels. As males perfected this "hyperactive" way of being, this distinct and valuable male trait was not only highly desirable but was in fact integral to the survival of the human species. As compulsory schooling became the norm in most societies, uniquely male traits were not at all adaptive in the newly constructed classroom setting. According to Bjorklund and Pellegrini (2002), the high activity levels currently in observed children can be directly linked to humanity's ancient and evolutionary past. School systems in the modern era require sedentary learning (e.g., sitting in desks for extended periods of time), and these relatively new expectations coupled with the proliferation of new childhood psychiatric disorders has, according to Jensen and colleagues, fueled the unprecedented rise of ADHD diagnoses across much of the United States.

From a developmental perspective, childhood has been altered dramatically over a relatively short time period. The unstructured, outdoor roaming of the past has been replaced by sedentary, adult-monitored play. Television, computers, and electronic video games now engulf children at every developmental stage. Children are continually immersed in artificial light and temperature, are surrounded by four walls with no access to the natural elements, and are expected to remain sedentary for hours at a time (Stolzer, 2005; Wilson, 1993). A review of the literature indicates that aggression, hyperactivity, and inattentiveness decrease when children are exposed to the outdoors, have freedom to engage in large motor activity, are interested in the subject matter, and are involved in one-on-one interaction with a caring and competent adult (Breggin, 2002). Although the *DSM–IV–TR* currently classifies ADHD-typed behaviors as pathological, Breggin insisted that inattentiveness, disorganization, high activity level, and getting bored easily with mundane tasks is not only developmentally appropriate but is in fact observable across cultures and across historical time with regard to child populations.

## IMPORTANT PREDICTORS OF ADHD

ADHD is diagnosed by particular behavioral patterns that include fidgeting, excessive running or climbing, not paying attention to instructions, and difficulty playing quietly. These behaviors must be persistent and must be displayed more frequently and more severely than is typically observed in individuals who do not have ADHD (APA, 2000). However, according to the Surgeon General of the United States (1999), diagnosing an individual with a mental disorder is open to many different interpretations that are rooted in value judgments that may vary across cultures. The Surgeon General also stated that diagnosing a disorder such as ADHD is rather precarious, as there are no definitive markers (e.g., lesions, lab tests, or brain abnormality) that can positively identify a particular mental disorder. According to Peter Jensen and James Cooper (2000), the belief that ADHD is neurological in nature is not supported by scientific evidence as current assessment procedures ignore the complex and diverse range of variables associated with particular childhood behaviors. Furthermore, researchers have pointed out that drawing precise and accurate boundaries between typical child behavior and abnormal behavior patterns is difficult at best. The science of accurately diagnosing ADHD is especially problematic because of the ongoing processes of cognitive, emotional, and physical development. By their very nature, children are ever changing, thus making stable measurements and/or diagnoses extremely complex. Using adult criteria for mental illness in children and adolescents is also scientifically questionable as many of the symptoms of adult pathology are characteristics of normal development in child populations (Surgeon General of the United States, 1999).

## KEY DISPARITIES IN THE CAUSES AND TREATMENT OF ADHD

Proponents of the "disordered brain" hypothesis insist that ADHD is the result of an atypical neurological

system and that pharmaceutical drug intervention is necessary to correct a chemical imbalance within the brain. The pharmaceutical industry has a vested economic interest in promoting this disordered brain hypothesis and has been quite successful in using a multimedia advertising campaign. Parenting magazines, television, and physician offices routinely distribute materials that refer to ADHD as a brain disorder, although no scientific data supports this assertion (Baughman, 2006; Breggin, 2002; Jensen & Cooper, 2000; Surgeon General of the United States, 1999).

Jensen and Cooper (2000) postulated that ADHD-typed behavior is highly adaptive and served human beings well until the advent of compulsory schooling. Baughman (2006) hypothesized that ADHD assessment tests actually measure adults' frustrations with typical and historically documented child behaviors. According to Baughman, a respected pediatric neurologist, "In the overwhelming majority of cases, the underlying issue is either a clash between a normal child and the requirements of his adult controlled environment or the product of diagnostic zeal in a newly deputized teacher-turned-deputy brain diagnostician" (p. 215). Baughman clearly pointed out the controversial nature of ADHD: Is this disorder a brain malfunction requiring pharmaceutical intervention? Or is ADHD a remnant of an evolutionary past that does not fit in with the rigid structure of the American school system?

## MEDICATION

The overwhelming majority of children diagnosed with ADHD are prescribed MPH in order to control undesirable behaviors (Baughman, 2006). Although it is well known that MPH can reduce disruptive behaviors and increase compliance and sustained attention, very seldom are the dangerous effects of this drug discussed openly (Stolzer, 2007). The Food and Drug Administration (FDA) has classified MPH as a Schedule II drug along with morphine, opium, and barbiturates as these types of drugs have been proven to be highly addictive and to cause a wide range of physiological atrophy (Breggin, 2002).

MPH has been found to produce severe withdrawal symptoms, irritability, suicidal feelings, headaches, and Tourette's syndrome, a condition that causes both physical and verbal "tics" (Breggin, 1999; Novartis Pharmaceutical Corporation, 2006). The drug also has been associated with weight loss, disorientation, personality changes, apathy, social isolation, depression, insomnia, increased blood pressure, cardiac arrhythmia, tremors, weakened immunity, growth suppression, agitation, fatigue, accelerated resting pulse rate, visual disturbances, drug dependency, anorexia, nervousness, aggression, liver dysfunction, hepatic coma, angina, and toxic psychosis (Breggin, 1999; Novartis, 2006).

According to the pharmaceutical firm Novartis (2006), MPH is a central nervous system stimulant; however, the mode of therapeutic action in ADHD is not known. Novartis openly states that the specific etiology or cause of ADHD is unknown and that no single diagnostic test can definitively diagnose ADHD. Novartis acknowledges that the effectiveness of MPH for long-term use (i.e., more than two weeks) has not been established in controlled trials and has stated unequivocally that the safety of long-term use of the drug in child populations has not yet been determined.

## LABELING EFFECTS

For more than 40 years, social scientists have been aware of the deleterious effects of labeling children and adolescents. Once an official label is affixed, adults' perceptions of the individual child can actually bring about expected behavior via a process called the "self-fulfilling prophecy" (Feldman, 2007; Rosenthal & Jacobson, 1968). With regard to the ADHD label, the problem is assumed to be within the individual child, requiring no alteration of the familial, contextual, physical, or socioemotional variables that surround the child. The children are not taught that they themselves can control their behavior (e.g., develop an internal locus of control). Rather, the child is convinced by adults that the only way to control behavior is through pharmaceutical intervention. In this way, individual self-efficacy is compromised, and behavior is collectively defined as being outside of the child's control.

## FUTURE DIRECTION OF ADHD RESEARCH

The pharmaceutical industry currently monopolizes ADHD research by systematically promoting ADHD as a neurological disorder, funding major medical conferences relating to ADHD, funding ADHD research, providing financial incentives for physicians who prescribe specific ADHD drugs, and funding groups such as CHADD (Children and Adults with Attention Deficit Disorder) who openly promote psychotropic drug use in child populations (Breggin, 2002; Jureidini & Mansfield, 2001). In the future, it is imperative that unbiased, empirical research is conducted to increase our understanding of the highly varied nature of ADHD. Furthermore, laws must be enacted that guarantee that scientifically based, objective research is guiding conventional therapeutic practice (Stolzer, 2007). Certainly, it is easier to medicate children than to collectively address the wide-ranging factors that are affecting child and adolescent populations in the modern era. Perhaps future

researchers will concentrate on the multitude of individual and society-level variables that affect developmental processes and, in doing so, will significantly increase our understanding of the vacillating complexities associated with the ever-developing human.

**SEE ALSO** Volume 1: *Disability, Childhood and Adolescence; Learning Disability.*

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# AUTISM

Autism is one of five pervasive developmental disorders. These developmental disorders were identified as pervasive because they affect more than one domain of development (as opposed to a specific developmental disorder that affects only one domain of development, such as a reading disorder). The other four pervasive developmental disorders are Asperger's Disorder, Pervasive Developmental Disorder–Not Otherwise Specified (PDD–NOS), Rett's Disorder, and Childhood Disintegrative Disorder. These disorders vary in terms of timing, severity, and nature of symptoms. However, all pervasive developmental disorders involve deficits in social functioning and repetitive behaviors.

Current prevalence estimates suggest that 1 in every 150 children in the United States is affected by a pervasive developmental disorder (Centers for Disease Control, 2007). Additionally, autism occurs four to five times more often in boys than in girls (Volkmar, Szatmari, & Sparrow, 1993). Current estimates of prevalence in the United States are similar to those of other countries, though significantly greater than in earlier decades. In 1979 autism prevalence was 2 to 5 children per every 10,000 (Wing & Gould, 1979). The cause of this increase in autism prevalence is widely debated. Some argue that this number reflects a true increase in cases of autism. Others argue that the change in prevalence is because of increased awareness and more accurate diagnosis of autism (especially high-functioning autism). Researchers have not fully resolved this debate.

Autism is a characterized by deficits in three areas: (a) social interaction, (b) communication, and (c) repetitive behaviors or interests. Although mental retardation is more common in children with autism than in the general population, not all children with autism also have mental retardation. Furthermore, some experts have argued that standard IQ tests, which rely heavily on language, underestimate the intelligence of children with autism.

Children with autism comprise a very heterogeneous group, reflecting variability in the nature and severity of symptoms. For example, children with a severe presentation of autism (e.g., low-functioning autism) may be (a) entirely uninterested in social interaction; (b) have no

verbal language skills; and (c) engage in repetitive behaviors such as rocking back and forth, flapping their hands, or banging their heads. By contrast, children with a milder presentation of autism (e.g., high-functioning autism) may (a) appear interested in social interaction but lack the social skills to maintain appropriate social relationships, (b) have age-appropriate language skills yet have difficulty using language socially (e.g., reading body language or knowing how to start or end a conversation appropriately), and (c) have an unusual and all-consuming interest (e.g., being intensely interested in one species of moth such that it consumes all of their free time and is the only thing they want to discuss). Researchers and theorists have speculated that the heterogeneity in autism may represent different subtypes or causes of autism. However, this has yet to be clearly determined by research.

Autism was first described by physician Leo Kanner (1894–1981) in 1943. Kanner described 11 children with what he termed *extreme autistic loneliness*. His original case studies described the children's physical and psychological functioning and proposed that autism was a disorder of biological origin. However, over time, he discarded discussion of biological causes and focused instead on family-related causes of autism. Specifically, he suggested that mothers who were consistently cold and rejecting of their children caused their children to turn inward and develop autism. Often times, this is referred to as the *refrigerator mother* theory of autism. This theory has been widely disproven by decades of research and is no longer recognized as a valid theory of autism.

## CURRENT THEORIES OF AUTISM

Although Kanner's refrigerator mother theory has been widely debunked, current theorists continue to debate (a) what constitutes the core deficit of autism and (b) the causes of autism. Core deficit theories of autism seek to better understand the disorder by clearly identifying the defining features of the disorder. One prominent theory focuses on the role of joint attention in the development and maintenance of autism. Before children are able to use words to communicate, they use eye contact and nonverbal gestures for two communicative purposes: (a) joint attention (nonverbal sharing) and (b) requesting (Bates, Camaioni, & Volterra, 1975). For instance, imagine that an 18-month-old child is seated at a table with her mother when her mother accidentally knocks a plate onto the floor. The toddler watches the plate drop to the floor, smiles, and then makes eye contact with her mother as if to say, "Wow! Did you see that?" In other words, the toddler is making eye contact with her mother in order to share her interest and enjoyment of this surprising event. This is in contrast to the toddler engaging in eye contact to request something. To exemplify the distinction between joint attention and requesting eye contact, imagine that the same toddler is sitting at the table trying to turn on a musical toy without success. After a while, the toddler makes eye contact with her mother, while at the same time handing her the toy. In other words, the toddler is using eye contact and a giving gesture to request help.

This functional distinction appears to be particularly important for understanding autism. In typically developing children, joint attention emerges at 6 months of age and is well-developed by 18 months of age. However, children with autism uniformly show severe deficits in joint attention eye contact. They engage in joint attention eye contact far less frequently than typically developing children (Mundy & Sigman, 1989) and children with other developmental delays (Kasari, Freeman, Mundy, & Sigman, 1995). It is important to note that requesting eye contact may remain relatively intact in a subset of children with autism. Thus, children with autism have a specific deficit in eye contact for social sharing, not a global deficit in eye contact.

Theorists have proposed that an innate drive to engage in joint attention is necessary for providing social learning opportunities that promote normal brain development and social development. Because children with autism lack this innate drive to engage in joint attention, they miss out on necessary social experiences. This, in turn, results in atypical brain development and perpetuation of social difficulties (Mundy & Neal, 2001).

Other theories of core deficits of autism focus on the role of cognition, social or otherwise. One of the most prominent social cognitive theories of autism proposes that autism reflects *mindblindness*, which is reflected by a core deficit in Theory of Mind (ToM). ToM reflects a child's capacity to understand that other people have thoughts, feelings, and beliefs that are independent and, perhaps, different from their own. Understanding ToM allows one to understand and predict another person's behavior. Typically developing children usually develop ToM by age 4. By contrast, there is a large amount of research showing that children with autism lack a well-developed ToM (Baron-Cohen, Leslie, & Frith, 1985). It has been suggested that this deficit in ToM reflects deficits in information-processing abilities that are social in nature. It has also been suggested that joint attention is a precursor to ToM, although there is little evidence to support this argument. Nonetheless, like joint attention, ToM deficits do appear to be universally, and specifically, impaired in children with autism.

Current theories on the cause of autism focus on different mechanisms. The debate often focuses on the role of nature (heredity and neurobiology) versus nurture

***Autistic Child.*** *An autistic child plays with a toy. Children with autism comprise a very heterogeneous group reflected by variability in the nature and severity of symptoms.* CUSTOM MEDICAL STOCK PHOTO, INC. REPRODUCED BY PERMISSION.

(environment). Evidence for the role of nature comes from a large body of research showing that autism is largely heritable. Family and twin studies have revealed higher rates of autism and other pervasive developmental disorders among family members of children with autism. Indeed, having one child with autism increases the likelihood of having a subsequent child with autism 50- to 100-fold what would be expected in the general population (Folstein & Rutter, 1988). This inherited vulnerability, however, may not be specific to autism. Studies have also shown higher rates of other learning disabilities (e.g., dyslexia) in family members of children with autism than in the general population.

Research examining the role of specific genes in autism has yet to find one specific autism gene. Instead, researchers such as Dietrich Stephan (2008) have linked autism to several genes and to a specific deletion or duplication of material on chromosome 16 (Weiss, Shen, & Korn, in press). However, the identified genetic markers have been found in different and relatively small subsets of children. For instance, abnormalities on chromosome 16 were found in only 1% of cases. No genetic marker has been found to be present in every child with autism, further spurring the debate about different genetic pathways to and subtypes of autism.

Other biological factors that have been implicated in autism include differences in brain structure and function, as well as differences in autoimmune indicators. Research on neurobiological factors associated with autism has suggested higher rates of neurological disorders such as epilepsy. Research regarding structural and functional changes in the brain is mixed. However, accumulating evidence appears to point to some children with autism having larger brain volumes, as well as differences in the structure and function of areas of the brain important for attention, language, and emotions. Research also suggests a potential autoimmune role in autism. Studies of children with autism have found higher rates of autoantibodies and, in particular, antibrain autoantibodies.

Exploration of environmental causes of autism is one of the mostly hotly debated areas in autism. No one topic has been more controversial than the debate over the role of the measles, mumps, and rubella (MMR) vaccine. Some have proposed that thimerosal, a mercury-based preservative used in many childhood vaccines, causes autism. Others have proposed that it is the MMR vaccine itself that causes autism. Although many parents still contend that the MMR vaccine caused their child's autism, a large body of evidence suggests otherwise. Specifically, several large population studies have failed to find a link between the MMR vaccine and autism. One of the most compelling studies was a naturalistic study of the incidence of autism in the Kohoku district of Japan during a several-year period in which the district discontinued giving the MMR vaccine altogether. Despite there not being a single MMR vaccination given after 1993, incidence of autism increased at similar rates in the Kohoku district as seen elsewhere in the world where MMR vaccinations were routinely given (Honda, Shimizu, & Rutter, 2005). This study provides compelling evidence that the MMR vaccine is not likely to be a main cause of autism, nor can the administration of this vaccine explain the rise in autism prevalence in recent years. It is also notable that, as a precaution, thimerosal was removed from all childhood vaccinations. Despite this fact, autism prevalence rates have continued to rise. Thus, it also seems very unlikely that thimerosal is a main cause of autism.

Another proposed environmental mechanism involves severe food allergies and intolerance. Specifically, it has been suggested that severe intolerance to casein (milk protein) and gluten (wheat protein) may exacerbate symptoms

of autism. Currently, evidence for this theory is largely anecdotal. Furthermore, it may only be relevant to a subset of children with autism who also have gastrointestinal disorders. This is an area that would benefit greatly from well-controlled research studies.

One compelling area of research on environmental mechanisms involves the prenatal environment. Previous studies have suggested a link between prenatal and birth complications and autism. Similarly, studies have shown increased risk for autism following prenatal exposure to German measles, valproic acid, and thalidomide. Additionally, prenatal exposure to abnormally high levels of testosterone has also been implicated in autism. Finally, a recent study identified maternal antibodies that increase the risk of having a child with autism. These researchers suggest that these maternal antibodies may mistakenly attack fetal brain tissue, which later results in autism (Braunschweig et al., in press). However, not all mothers of children with autism have these antibodies. Thus, these antibodies likely play a role in only a subset of children with autism.

In conclusion, many different genetic, neurobiological, and environmental pathways to autism have been proposed. Research has not found a link between any one factor and the development of autism in all children. As such, it appears likely that there are multiple pathways to autism based on different combinations of genetic or biological risk and environmental exposure.

## TREATMENT

Autism experts agree that early identification and intervention is crucial to reducing severity of symptoms and optimizing functioning in children with autism. Studies on the infant siblings of children with autism have identified several early warning signs for autism, including a lack of joint attention eye contact or not responding to one's name when called at age 1. Other possible warning signs include delayed language development and motor milestones (e.g., walking).

Parents of children with autism have many treatment options to choose from including, but not limited to, educational interventions, speech therapy, occupational therapy, sensory integration therapy, applied behavioral analysis, facilitated communication, social skills instruction, play-based treatments, and medical interventions. Parents of children with autism often use multiple types of treatments at the same time, on the order of 20 to 60 hours of treatment per week. For example, a report from the Interactive Autism Network (2008) suggests that children with autism are enrolled in an average of five different treatments at any one time.

To date, only three treatments have been shown to be effective in randomized, controlled studies: applied behavior analysis (ABA), joint attention and symbolic play intervention, and the structured teaching of the Treatment and Education of Autistic and Related Communication-Handicapped Children (TEACCH) organization. Research on ABA found that young children with autism who received 40 hours per week of therapy for 2 years showed significant increases in IQ and improvement in educational functioning when compared to children who received 10 hours or less of ABA per week (Lovaas, 1987). Young children with autism who participated in either a joint attention or social skills intervention for a length of 6 weeks at 30 minutes per day were found to more frequently engage in joint attention and demonstrate more sophisticated play skills than children who received no treatment (Kasari, Freeman, & Paparella, 2006). Finally, a study of the effectiveness of the TEACCH program found that children who received treatment for 4 months showed greater improvement in developmental test scores than children who received no treatment (Ozonoff & Cathcart, 1998).

Aside from these three instances, there is very little scientific evidence to support the effectiveness of the vast majority of treatments for autism. This does not imply that these treatments are necessarily ineffective but that their effectiveness has not yet been tested in well-controlled research studies. Several large comparative studies of autism treatments are underway with the expectation that the results of these studies will better inform treatment decisions in future decades.

**SEE ALSO** Volume 1: *Attention Deficit/Hyperactivity Disorder (ADHD); Disability, Childhood and Adolescence; Genetic Influences, Early Life; Learning Disability.*

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***A. Rebecca Neal***

# B

## BANDURA, ALBERT

***1925–***

Albert Bandura, born on December 4 in the Canadian hamlet of Mudare, Alberta, is the founder of social cognitive theory, which has been applied across disciplines such as psychology, sociology, communication studies, and management to study human motivation, thought, and action. Social cognitive theory posits that people intentionally direct and orchestrate their own life course within ever-changing social environments that impose constraints and offer opportunities. Individuals are not passive recipients of environmental influences. Instead, they guide their own self-development, choosing and creating environments. Children learn to regulate their behavior, thoughts, affect, and motivation, thus influencing their life course. This capacity for self-directedness is a distinctive feature of the theory as it has been a distinctive feature of Bandura's life.

Bandura's mother migrated from the Ukraine, his father from Poland. Despite economic hardship, the family valued education and the finer aspects of life. As Bandura has stated, "My mother was a superb cook, and my father played a sprightly violin" (Pajares, 2004, p. 1). An appreciation of music and cuisine has characterized Bandura throughout his life. The only school in Mudare lacked resources, but rather than holding back the young Bandura, this promoted his self-directed learning. He received a bachelor's degree from the University of British Columbia in 1949 and earned a master's degree (1951) and a doctorate (1952) from the University of Iowa. In 1952 he married, his wife Ginny becoming his life companion and mother of their two daughters. Bandura joined the psychology department at Stanford University in 1953 and has remained there. He has received many honors and awards, including 14 honorary doctorates and an Award for Outstanding Lifetime Contribution to Psychology from the American Psychological Association (2004). He has served on more than 30 editorial boards of scholarly journals and has written nine books and hundreds of journal articles. In 2002 Bandura was ranked as one of the most eminent psychologists of the 20th century and the most frequently cited living psychologist (Haggbloom, 2002).

Early in his career Bandura moved beyond the prevailing behaviorist and psychoanalytic approaches by providing a social learning analysis of social modeling that did not rely on associationistic conditioning and trial-and-error learning. From his classic Bobo doll experiments, in which children were shown models punching an inflatable doll, Bandura established the cognitive factors of learning through observation. Children learn novel physical and verbal responses by observing a model. Their reproduction of the modeled responses, however, is dependent on whether they expect punishment or reward for that behavior. Social modeling enables people to transcend their everyday lives by exposing them to new ideas. The principles of social modeling have been generalized to television dramas in developing countries to address problems such as literacy, family planning, the status of women, and the spread of HIV/AIDS (Bandura, 2002). Television modeling provides strategies and incentives to guide people toward managing problems they encounter in their daily lives and thus transform their lives for the better.

***Albert Bandura.*** LINDA A. CICERO/STANFORD NEWS SERVICE.

In recognition of the broadening scope of his research and to distinguish his approach from the multiple versions of social learning theory, Bandura expounded social cognitive theory in the 1986 book *Social Foundations of Thought and Action: A Social Cognitive Theory*. Drawing on a large body of research, he combined the central role of cognitions, self-regulatory processes, and motivations into an agentic theory of self-development, adaptation, and change that emphasizes social influences. Individuals are viewed as self-reflecting, self-regulating, and capable of mapping their own life courses. Self-regulation develops from personal standards constructed from a diverse array of social influences and is not simply a mimicking of what children have been taught, have been evaluatively prescribed, or have seen modeled. As children age, they are better able to regulate their behavior by means of self-evaluative reactions that are based on personal standards; however, most behavior is regulated by the interplay of self- and social-evaluative reactions.

Self-efficacy is the cornerstone of the agentic social cognitive theory of human behavior. Bandura introduced the concept of self-efficacy, a judgment of personal capabilities to produce specific attainments and goals, in an article published in 1977. Strong self-efficacy beliefs provide the staying power that allows children to master academic skills and develop and sustain a wide spectrum of social behaviors. Unless people believe they can attain their goals, they have little motivation to attempt to do so. Self-efficacy beliefs extend beyond individual beliefs to collective efficacy: an individual's belief about a group's capabilities.

Bandura later addressed the issue of moral agency. Early in their lives children develop personal standards that do not condone aggression and immoral conduct. However, they also develop the capacity to disengage their moral standards. The concept of moral disengagement explains how people who do not countenance violent and immoral conduct can commit atrocities against humanity. For example, soldiers killing "the enemy" is justified in the name of righteous ideologies and nationalistic imperatives.

Concern for the improvement of the human condition is pivotal to social cognitive theory. This theory not only offers an explanation of agentic human functioning based on social modeling and self-regulatory processes but also provides a basis for people to develop and strengthen their efficacy beliefs so that they can improve their own and others' life circumstances through personal and social change.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Moral Development and Education;* Volume 2: *Agency.*

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***Kay Bussey***

# BEHAVIORAL GENETICS

**SEE** Volume 1: *Genetic Influences, Early Life;* Volume 2: *Genetic Influences, Adulthood;* Volume 3: *Genetic Influences, Later Life.*

# BILINGUAL EDUCATION

Bilingual education encompasses a range of instructional programs in which children are taught in two languages. In the U.S. context, bilingual programs provide instruction in English and in a second language. Bilingual education originated to serve language minority students; however, programs now serve both language-minority and native-English speakers. Numerous contextual factors—human and material resources, administrative support, parent education levels, neighborhood and school context—contribute to great variation in program offerings and outcomes. Complicating the matter, the end goal of bilingual education has been fraught with conflict since its current incarnation under the Bilingual Education Act of 1964 (BEA).

As a compensatory education model, the BEA legislated the use of language-minority students' primary language for instruction as a means to acquire English. Transitional bilingual programs (often referred to as early-exit or late-exit bilingual) maintain as their goal English language acquisition and a transition into English-only instruction as quickly as possible. Alternately, maintenance bilingual education programs promote biliteracy in both English and the second language; dual-immersion, maintenance, heritage language, and two-way bilingual programs fall in this category. Whether the end goal is biliteracy and biculturalism, or only English acquisition, often determines student outcomes and achievement.

## HISTORY AND DEVELOPMENT OF BILINGUAL EDUCATION

Bilingual education is not new to this century; the United States has a long history of native language instruction. As early as 1694, German-speaking residents of the colony of Pennsylvania in Philadelphia established schools using their mother tongue. German-language and other bilingual schools operated through the end of World War I in an environment of linguistic neutrality, if not tolerance. After World War I, rampant nationalism and nativism nearly brought an end to bilingual education; by 1923, 34 states had designated English as the sole language of instruction permitted in public and private elementary schools. Such restrictions, however, were curtailed after World War II when U.S. military personnel returned, having been frustrated by an inability to communicate with their allies, who came from societies where linguistic pluralism was the norm. After the Soviet Union launched its Sputnik satellite, the U.S. federal government passed the National Defense Education Act in 1958; Titles VI and IX of that act focus on the retention and expansion of foreign language resources in the United States.

The revival of bilingual education in the second half of the 20th century began in 1963 with the opening of Coral Way Elementary School in southern Florida. Established by Cuban refugees anticipating a prompt return to Cuba, the bilingual program at Coral Way provided a means of maintaining their children's native tongue. As a result of the civil rights movement, the Elementary and Secondary Education Act (ESEA) of 1965 was amended to include the BEA of 1968, which became ESEA Title VII. The amendment included bilingual education programs in federal education policy and authorized the use of federal funds to support primary language education for speakers of languages other than English. Although the BEA permitted primary language instruction, it did not mandate it.

In 1974 *Lau v. Nichols* went before the U.S. Supreme Court on behalf of Chinese language-minority students in San Francisco challenging the inequality of access to education for nonnative speakers of English. The court found for the plaintiffs, noting that "students who do not understand English are effectively foreclosed from any meaningful education" (*Lau v. Nichols*, 1974). Effectively, the court decided, the provision of the same books, curricula, and teachers, all in English, is insufficient to ensure access to an equal education. Although *Lau* mandated linguistic support services, no mandate existed for any specific academic programs or pedagogic practices; bilingual education was listed as one of many possible curricular options.

In response to *Lau*, California was one of the first states in the nation to enact a comprehensive bilingual-education bill, the Chacón-Moscone Bilingual-Bicultural Education Act of 1976. This piece of legislation mandated that school districts must provide primary language instruction whenever ten non-English proficient (NEP) or fifteen limited English-proficient (LEP) students of the same language group were present in the same grade level. Chacón-Moscone provided schools with detailed instructions about the type of language support that should be provided and, notably, proclaimed bilingual education a right of limited English-proficient students. There was almost no enforcement of Chacón-Moscone, however. Even when most widely offered in California, bilingual education only served approximately 30% of students who would qualify (California Department of Education, 2008). In 1998, Californians passed Proposition 227 effectively banning bilingual education and instruction in languages other than English. Since then, Massachusetts and Arizona have also passed English-Only amendments in order to curtail bilingual education efforts.

***Story Time.*** *Teacher reads a Spanish language book to students.* GALE, CENGAGE LEARNING.

**Definition of terms** Since the passage of the BEA and the *Lau* decision, federal, state, and local entities have developed many terms to describe the growing immigrant language-minority population in public schools from kindergarten through twelfth grade. Federal regulations refer to those language-minority students deemed limited English proficient as LEP; states, districts, and schools often prefer the terms *English language learner* (ELL) or *English learner* (EL) to designate such students. *Lau* requires that ELL students receive some sort of services, the most common of which is English as a Second Language (ESL) instruction. Bilingual classrooms provide instruction in the students' primary language, but offer ESL services as well. ESL classes, however, do not generally involve bilingual instruction, though at times the primary language is used for clarification.

As mentioned already, bilingual programs may be classified as transitional or maintenance; transitional programs generally provide some instruction in the student's primary language in the first few years of schooling, with a move to an English-only instructional setting by either second grade (early-exit) or fourth grade (late-exit). Maintenance bilingual programs continue instruction in the primary language after the student has gained proficiency in English, with the goal of biliteracy; these programs are also geared only toward language-minority students. However, dual language and two-way immersion programs incorporate both native English speakers and language-minority students in the same classroom wherein both groups are taught academic content in English and Spanish, for example, while receiving ESL instruction, and Spanish as a second language (SSL) instruction. The goal in these classrooms is biliteracy for all students. Despite its prevalence in popular discourse, however, bilingual education remains a relative rarity; most ELLs receive little to no instruction in the primary language (Zehler et al., 2003).

**Significance of research in bilingual education** Bilingual researchers and educators currently point to the loss of a natural resource: bilingual proficiency among language-minority children in our society. Children of immigrants lose the home or primary language within the first

generation without active intervention (Rumbaut & Portes, 2001). The study of bilingual education is fundamental for social, civic, cultural, and economic reasons. Bilingual education provides one avenue through which schools can engage immigrant language-minority students (and their parents) who might not otherwise be drawn into the democratic process. Bilingual education is one facet of the larger field of multicultural education, which posits the importance of the home culture, language, and identity; bringing the family and the school together as partners in the education of the next generation (Baker, 2006). Socially, bilingual education validates the culture of the home in the context of the host society, the school. Through bilingual education and primary language maintenance and development, schools work to develop students' identities in a positive reflection of the larger sociopolitical situation. Although the goals of bilingual education are ultimately pedagogic, focused on the academic achievement of language-minority students, the role of bilingual education in these students' social and cultural integration merits consideration.

**Themes and theories underlying bilingual education** Pedagogically, bilingual education is based in part on the theory of linguistic transfer (Baker, 2006); academic and cognitive skills learned in the primary language will transfer after sufficient proficiency is mastered in the second language. In addition, bilingual education draws heavily on Second Language Acquisition (SLA) and sociolinguistic theory wherein achievement depends not only on the purpose for which the language is acquired, but also the context in which the language is acquired. Finally, SLA theory posits that two forms of language exist: social and academic. Social language, or basic interpersonal communicative skills (BICS), negotiates meaning with the use of contextual clues (Cummins, 1984). Many transitional bilingual education programs move students into English-Only instruction as soon as they demonstrate BICS proficiency. In contrast, a primary goal of maintenance bilingual education is to foster academic language, or the development of Cognitive Academic Language Proficiency (CALP) in both languages. CALP is more complex, entailing both cognitive skills and knowledge of academic content. In an academic setting it is imperative that both social and academic language (BICS and CALP) are used to ensure an additive form of bilingual education. Here, social language serves as a foundation for learning the more complex academic language required for academic achievement.

## COGNITIVE BENEFITS OF BILINGUALISM AND BILINGUAL EDUCATION

Before the 1960s, bilingual students were considered disadvantaged; their performance on standardized intelligence tests suggested a deficit in comparison with the scores given to their monolingual counterparts. Many of these studies in fact measured English language proficiency rather than intelligence (Ovando, Collier, & Combs, 2003). Peal and Lambert (1962) conducted a landmark study that controlled for student background variables and found that the intellectual experience of the bilingual outpaced that of the monolingual in concept formation, mental flexibility, and intellectual capacity. Numerous studies since then have confirmed these findings (August & Hakuta, 1997) suggesting the long-term benefits for bilingual education.

## LONG-TERM EFFECTS OF BILINGUAL EDUCATION

It is unlikely that transitional models of instruction will produce either high levels of academic achievement or bilingualism because they are based on assimilation, rather than acculturation. Bilingual education models that focus on biliteracy and cultural pluralism promote primary language maintenance while English is being learned, allowing for selective acculturation (Rumbaut & Portes, 2001) and ultimately, bilingualism. The long-term effects of bilingual education depend on the quantity and quality of the primary language instruction provided, as well as the context of the program itself.

## FUTURE OF THE FIELD

After passage of *English-Only* legislation in several states, bilingual education underwent an increase in dual immersion and two-way programs. Native English speaking parents now advocate for the development of second language proficiency in their children. No longer relegated to the compensatory education models of the mid-1960s, researchers recognize the value of bilingual education as enrichment-added education. Research and practice indicate a shift to bilingual education as enrichment; the target audience has expanded beyond language-minority students to include their native English speaking classmates. However, although the field may shift from compensatory to enrichment, the federal government continues to operationalize bilingual education and primary language instruction as a means to an end. With the authorization of the No Child Left Behind Act in 2001, Title VII and its focus on bilingual education disappeared; in its place, Title III now deals with English language acquisition. Pedagogically and culturally, the future of bilingual education rests on its success in incorporating meaningful and challenging curriculum, theory-based best practice and educators who are well versed in language acquisition theory.

**SEE ALSO** Volume 1: *Assimilation; Immigration, Childhood and Adolescence; Policy, Education; Racial*

*Inequality in Education; School Tracking; Vocational Training and Education.*

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# BIRACIAL YOUTH/ MIXED RACE YOUTH

The 2000 U.S. Census brought multiracial identification to national attention through a policy change that allowed respondents to check multiple boxes in answering the question about race. As a result of that change multiracial people emerged as one of the fastest-growing populations in the United States between 1990 and 2000; 41% of the multiracial population was under age 18, compared with 25% of the monoracial population. In 2000 there were 2.9 million multiracial persons under age 18, accounting for 3.95% of the youth population in the United States. After the overturn in 1967 of laws banning interracial marriage, intermarriage in all racial groups increased dramatically (Lee & Bean, 2004). Multiracial births reached 5.3% of all births in 2000 (National Center for Health Statistics, 2002). Multiracial youth are a growing demographic whose experiences are relevant to the experiences of all young people growing up in a multiethnic society.

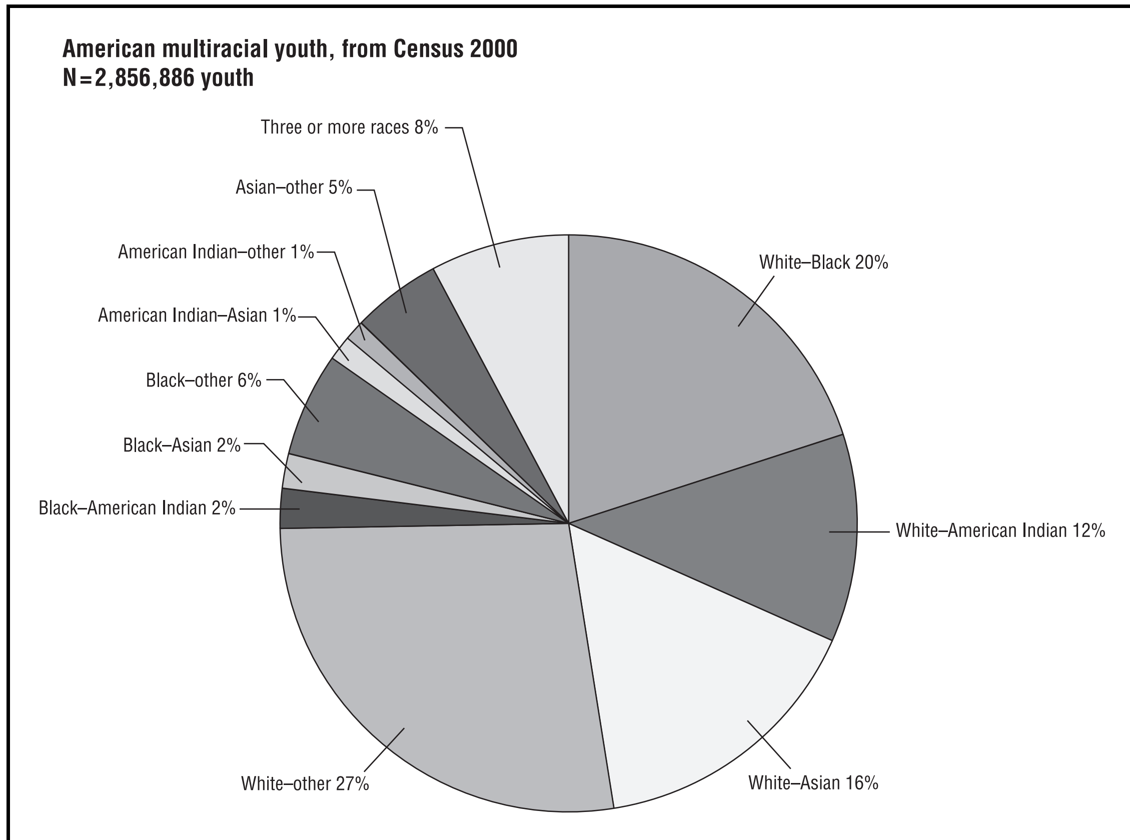
Historically, research on multiracial people was stymied by cultural norms against acknowledging multiracial ancestry, small samples, and a lack of theoretical grounding or hypothesis testing. The marginal man theory of Park (1928) and Stonequist (1935) argues that multiracial people are marginalized and isolated by all monoracial groups. That theory still informs the work of some researchers despite evidence that multiracial people are integrated and well-adjusted members of society.

## THEORIES AND THEMES IN THE LITERATURE ON MULTIRACIAL YOUTH

Much of the literature on identity development among multiracial persons starts by challenging the notion of race as a single and fixed aspect of identity. Racial identity develops slowly for these youth, and their sense of racial boundaries is more fluid than fixed (Johnson, 1992). Theories of multiracial identity development focus on the phases and/or tasks that youth typically complete or accomplish in establishing their identities, with variations for different racial mixes. A second theme of the literature has been an examination of the developmental implications of having a flexible racial identity. In this entry literature on identity development is differentiated from literature on the impact of identity on youth outcomes.

After Park's and Stonequist's work on multiracial people there was a dearth of attention to the topic for 40 years. In the 1970s, when the biracial baby boom began, theories of biracial identity and development focused on adaptation. Research from that era suggests that multiracials and monoracials have equivalent, though slightly different, processes of racial identity development (Thornton & Wason, 1996). However, the paucity of data prevented empirical testing of those theories, and critics charged that they did not consider the issue of choosing between identities or asserting a multiracial identity in a world that was unaware of multiraciality or interested in sanctioning it rather than understanding it (Daniel, 2002).

Current theories focus on mulitracials as a unique group for whom identity can be fluid across time and contexts. These theories address the conflict and guilt associated with choosing one identity over others and the resolution of those conflicts as a person comes to accept,




***American Mutliracial Youth.*** *Census 2000.* CENGAGE LEARNING, GALE.

integrate, and assert all the parts of his or her identity. In this entry these theories are divided into three types: developmental phase theories loosely based on Piaget's stages of cognitive development, task theories based on Erikson's identity development model, and a third group that was designed specifically to explain multiracial identity.

**Phase Theories** The phase theories (Collins, 2000) typically begin with awareness, a stage describing young children's experiences of personal identity: becoming aware of skin tone and its connection with group membership. The second phase, choice, typically includes a growing awareness of cultural differences based on skin tone, along with an internal struggle to embrace internally and claim publicly a particular racial identity. Struggle, the third phase, involves confusion and guilt over having chosen a particular identity and in so doing rejecting those of some family members and peers. Multiracial youth may struggle in claiming an identity that is inconsistent with the norm by which children are categorized in accordance with the race of the lower-status parent (the norm of hypodescent). The fourth phase consists in strategizing ways to resolve the struggle stage by convincing significant others that one's choice is legitimate and/or by broadening one's own conception of racial identity to include context or time-dependent racial identity. The final phase includes integrating all of one's identities and accepting oneself as a multiracial person whose identity is not compromised or determined by others. There may be recognition of multiracial as the appropriate reference group and/or a sense that all of one's different racial identities are valuable.

**Task Theories** The task theories (Gibbs, 1987), which are based on Erikson's (1968) general theory of youth identity development, focus on the particular challenges of racial identity development for multiracial people. Erikson argued for the formation of a stable (and monoracial) identity through the accomplishment of tasks such as gaining autonomy and independence from parents, developing positive peer relations, developing a sexual identity, and exploring career options. Multiracial task theorists argue for a flexible but integrated identity that changes as needed over time and across context. Although proponents of Eriksonian theory might consider such variability an unhealthy sign, multiracial theorists recognize it as a strategy for negotiating

***Biracial Youth.*** *Because Jackson, Mississippi's schools are largely divided along racial lines, Kim Stamps, center, home schools her biracial children; son, Alkebu-lan, 12, left, and daughter, Abyssinia, 10.* AP IMAGES.

various social expectations and multiple truthful ways to identify. Thus, to the traditional Eriksonian developmental tasks (establish peer relations, sexual identity, and career choice), multiracial task theorists add the tasks of integrating racial identities and managing others' expectations for racial identification.

**Multiracial Identity Theories** Proponents of theories of multiracial identification argue that people's identities are fluid and are shaped by inherited influences, traits, and context. Root (1999) explained how all these influences are filtered through the lenses of generation, class, gender, and history of race relations to produce a variable but healthy racial and ethnic identity. Poston's (1990) model is similar to Root's, but it also explains how the relative status of the various ethnic groups in a person's background affect that person's choice of racial identity, along with physical appearance, language, age, and political involvement. Poston's and Root's models consider physiological factors as well as environmental factors at the micro (family, peer group), meso (school, neighborhood), and macro (societal, national) levels. These two theories were designed to capture the identity formation of people of all racial mixtures.

In contrast, the 2001 model of Rockquemore and Brunsma focuses exclusively on how the relatively small population of Black-White people self-identifies. Despite its size, this population merits special attention because of the social distance between Blacks and Whites in North American society and the resulting social pressures on part-Black youth to identify as Black. Rocquemore and Brunsma's model features four identity types: singular (Black or White), border (biracial), protean (sometimes Black, sometimes White), and transcendent (no race). They found that the "one-drop rule" constrains part-Black people, even those with only one Black great-grandparent, to identify as Black. The one-drop rule is enforced by Whites and Blacks alike; to maintain political and social group strength, the Black community has developed an interest in maintaining this oppressive rule (Davis, 2001). In contrast to part-Blacks, Rockquemore and Brunsma argued that nonBlack multiracial people are not subjected to the one-drop rule. The theories of multiracial identity development were devised largely to fill gaps in identity theories that had focused on the particular racial and cultural issues of distinct groups.

However, most of the issues facing monoracial minority youth also are faced by most multiracial youth. Except for those who look and act White, multiracial young people face ethnic discrimination from Whites. All multiracial youth experience ethnic discrimination from members of ethnic groups who think they are not "ethnic enough" to be legitimate members of their group. In contrast, some part-White youth may benefit from the privileges and networks of the White parts of their families, whereas others are cut off from all or most of their White relatives. Like the varieties of monoracial minority youth, multiracial young people develop in extremely varied ethnic and cultural contexts.

## STATE OF THE FIELD

Changes in social interaction norms and data-gathering norms increased the visibility of multiracial youth and amplified empirical research on that population. Most empirical research on multiracial youth has made use of samples identified by ancestry regardless of whether the respondents assert a multiracial identity (Rockequemore & Brunsma, 2001; Hitlin, Brown, & Elder, 2006; Herman, 2004; Harris & Sim, 2002; Brunsma, 2005). These studies consider the types and determinants of identity as well as the effects of identity on developmental outcomes. Herman (2004) found that physiognomy, ethnic identity, race of coresident parents, racial makeup of the neighborhood, and racial makeup of the school are associated with reported race among multiracial high school students. Rockquemore and Brunsma's (2001) study shows that among part-Black multiracials skin tone is not much of an influence on biracial identity; what matters is the multiracial person's assumption of how others perceive his or her appearance. Brunsma (2005) found that the parents of part-White multiracial preschoolers often listed their children's identities as mixed or White. Similarly, Xie and Goyette (1997) found that the parents of part-Asian biracial children used seemingly arbitrary criteria to classify their children's race. Among parents of part-Hispanic children, 27 to 30% categorized their children as multiracial, depending on the other options. Finally, Hitlin et al. (2006) found that multiracial youth change their racial identities over time.

The new survey data have necessitated methodological decisions and research on the management of race data. For example, to summarize information about a group of multiracial people, scholars must sort them into groups. There are many different "mixes" of multiracial youth. The early literature focused on Black-White mixes, but mixes with Asian, American Indian, Middle Eastern, and Hispanic are also part of the literature. For biracial subjects in relatively populous categories such as Asian-White, Hispanic-White, Black-White, American Indian-White, and Black-Hispanic, categorizing respondents is a straightforward task. However, for the small number of multiracial subjects, the researcher must group them in an uninformative "other" category or choose the biracial category that "best" describes them.

## CONTEXT AND RACIAL IDENTIFICATION

Regardless of a multiracial youth's particular racial ancestry, the tasks of discovering and asserting a racial identity are complex. Although they often are forced to designate a single racial identification that ignores one or more of their racial ancestries, multiracial youth typically do not hold a single racial identity. Little or no research exists on differences between racial identity and racial identification that allow young people to designate more than one racial or ethnic group for both identity and identification. However, several articles have used survey data to consider the factors that affect racial identification among multiracial youth. Herman (2004) and Hitlin et al. (2006) look at adolescents' self-identifications, and Brunsma (2005) looks at parents' identifications of their children. Although the respondents differ in these studies, the findings are largely similar: Parent and youth reports of racial identification are influenced by contextual factors such as neighborhood and school racial composition, regional history of racial categorization types, immigration status, language use at home, race of peers and coresident parent(s), skin tone, and racial ancestry. For example, multiracial youth who live in wealthier and whiter neighborhoods are more likely to identify as White, whereas those who attend predominantly White schools and are members of ethnic social crowds are more likely to identify as nonWhite (Herman, 2004). Some of these relationships may be endogenous: A youth's racial identity may influence that youth's parents' choice of a school or neighborhood with a particular racial composition, and it is likely that racial identity is associated with a youth's choice of peers.

For multiracial youth, contexts contain people and symbols of different racial and ethnic backgrounds, and this may contribute to value and cultural incongruence. Multiracial young people cope with this in part by having fluid racial identities over time and across contexts. This strategy allows different aspects of a multiracial youth's racial identity to become salient at different times and in different places, similarly to the way monoracial youth experience healthy inconsistency in cultural identity or peer crowd identity. Although theorists have argued that holding an inconsistent racial identity is detrimental, Root (1997) showed that it is a typical and healthy part of multiracial adolescent development.

Context influences much of an adolescent's exposure to stressors. Examples include being the only minority group member in a high-track math course or living in a neighborhood where most people are of a different race. Such incongruent racial contexts are challenging for all youth, and multiracial youth almost never have congruent racial contexts that consist of people who all share their particular racial mixes. Some scholars argue that multiracial adolescents lack a sense of racial belonging because no single race group embraces or can support them (Gibbs, 1998). Others argue that belonging everywhere and nowhere strengthens and diversifies their identities because they learn to span boundaries and switch codes appropriately in each context. Herman shows how racial congruence within a context acts as an intermediary between identity and outcomes (Herman, 2004). For

example, belonging to an ethnic crowd and having a smaller percentage of White students in a youth's school are associated with minority racial identification, whereas residing with a White parent is associated with White identification.

Time, generation, and geographic location also are associated with racial identification among multiracial populations. Twine (1997) provided ethnographic evidence of multiracial young women's changing identities, particularly during adolescence, when dating begins. Part-Black girls who are raised in White communities are most likely to experience a change in identity from nonBlack to Black as they start dating. Hitlin et al. (2006) showed that multiracial youth's racial identifications on surveys typically change over time by adding a category, subtracting a category, or changing categories. Generation of immigration affects racial identity in the expected sense: The further in time they are from immigration, the less likely multiracial part-Asian youth are to identify as Asian (Herman, 2004). Some scholars argue that the political and social history of a geographic location can affect people's racial identity (Root, 1997). In Louisiana, which has a history of slavery and strict enforcement of the one-drop rule, most part-Black people identify as Black, whereas in Oklahoma, which has a history of tolerance for racial mixing among American Indians, Blacks, and Whites, many more part-Black people identify as mixed.

## FUTURE DIRECTIONS

In 2000 the U.S. Census and other large, nationally representative data sets began to change their demographic race questions to allow a "check all that apply" option. This change has increased the visibility of the multiracial population and also may have encouraged multiracial people who formerly identified with only one race group to recognize the legitimacy of expressing their multiple ancestries. There is evidence that simply asking students to categorize photos with both a "check all that apply" item and a "check the one box that best describes you" item increases the number who report a multiracial heritage for themselves. Elsewhere research is being done on the impact of holding a particular identity on various developmental outcomes. For example, holding a minority identity is associated with higher self-esteem and fewer depressive symptoms but lower school achievement except in the case of Asian identifiers (Udry, Li, & Hendrickson-Smith, 2003). Increasing attention has been paid to multiracial youth in the clubs and activities aimed at their population (Renn, 2004), the magazines they can subscribe to, the organizations they can join, and their celebrity status. Ideally, these organizations and activities can help foster positive multiracial identities, and they are sources of information and camaraderie.

**SEE ALSO** Volume 1: *Assimilation; Identity Development; Immigration, Childhood and Adolescence; Racial Inequality in Education.*

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***Melissa R. Herman***

## BIRTH CONTROL, ADOLESCENT USE

**SEE** Volume 1: *Sex Education/Abstinence Education; Sexual Activity, Adolescent; Transition to Parenthood;* Volume 2: *Birth Control.*

## BIRTH WEIGHT

Birth weight is the first weight of a fetus or newborn and is obtained shortly (ideally less than an hour) after birth. Babies born weighing more than 2,500 grams (5.5 pounds) typically are categorized as having normal birth weight, whereas babies weighing less than that are categorized as having low birth weight. Babies weighing less than 1,500 grams (3.3 pounds) frequently are placed in a separate category of very low birth weight. These conventional thresholds are based on extensive evidence showing that babies and children born in the lower weight ranges have much higher risks of infant mortality, poor health, disability, and developmental/cognitive delays.

A baby's weight at birth results from the rate at which the baby grew in utero and the duration of the pregnancy (the gestational age of the baby). Low birth weight therefore results from growth restriction (being small for gestational age) and/or preterm birth (birth before 37 weeks of gestation). Growth restriction and preterm birth are related to a range of factors that include: (a) the fetus/baby's characteristics (e.g., sex, congenital anomalies); (b) the mother's health and behavior throughout her life (e.g., her birth weight, childhood nutrition, history of smoking while pregnant, use of prenatal care services); and (c) the past and present social and physical environment (e.g., maternal socioeconomic conditions during childhood and adulthood, exposure to toxins).

Although data before the mid-20th century are sparse, it appears that birth weights increased with industrialization. For example, between 1900 and 1950 rates of low birth weight in Europe appear to have dropped from between 15% and 17% to between 7% and 9%. Since the 1960s rates of low birth weight in industrialized nations have remained relatively stable at approximately 8%. There has, however, been improvement in birth-weight-specific survival, particularly among the smallest infants. In 1960 a baby with very low birth weight in the United States had about a 50% chance of surviving until age one, whereas in 2000 it had about a 75% chance. Much of this improvement in survival can be credited to advances in neonatal intensive care. Although these mortality reductions represent a significant accomplishment, very low birth weight survivors face several physical health challenges, and higher survival rates in this group ultimately can increase adult disability rates.

### BIRTH WEIGHT DIFFERENTIALS

Although low birth weight has been studied extensively in industrialized nations, the vast majority (95.6%) of babies with low birth weight worldwide are born in developing countries. In 2000 the rate of low birth weight in developing nations (16.5%) was more than double the rate in most industrialized nations and similar to the rates in Europe about 100 years earlier. These dramatically higher rates of low birth weight in developing nations reflect large international disparities in income, maternal health, food supply, shelter, and health care.

Disparities in birth weight in rich industrialized nations also can be stark. In the United States in 2005 the rate of low birth weight among non-Hispanic Black Americans was twice the rate among Whites (14% versus 7%, respectively). Rates of low birth weight in industrialized nations also tend to be significantly higher among younger mothers and mothers with incomes below the poverty line.

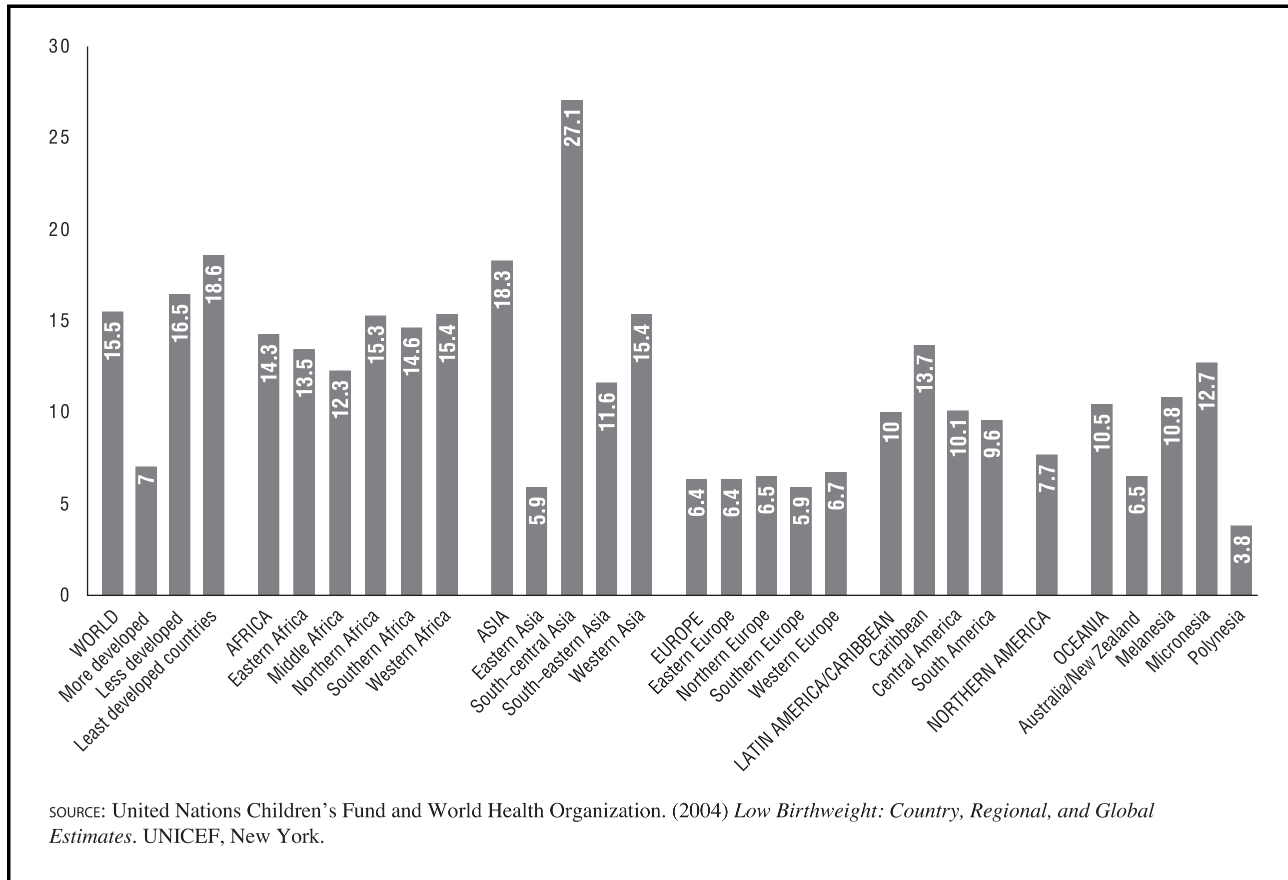


***Figure 1.*** *Percentage of low birth weight infants by United Nations regions, 2000.* CENGAGE LEARNING, GALE.

## CONSEQUENCES OF BIRTH WEIGHT

Birth weight is an important topic of study because size at birth is a key indicator of the future opportunities, or life chances, of a baby. Low birth weight has an effect on life chances by increasing the risk of infant mortality roughly 20-fold. Among those who survive the first year, low birth weight can limit life chances by hindering good health and cognitive development. Babies with very low birth weight are at increased risk for a range of serious disabilities, such as cerebral palsy, mental retardation, hearing/vision impairment, and chronic lung or gastrointestinal problems. Slightly larger babies (those between 1,500 and 2,499 g [3.3 and 5.5 lb]) are significantly less likely to face these disabilities but still may encounter a range of more subtle disadvantages. Relative to those in the normal range of birth weight, infants with low birth weight on average require more familiarization time before they can recognize people and objects and typically are less adept at manipulating objects. Children with low birth weight also tend to score lower on IQ tests than their heavier counterparts. Such developmental disadvantages may affect school progress. By age 18 years, individuals with low birth weight are less likely to have graduated from high school and more likely to have been left back a grade.

Low birth weight can continue to affect well-being throughout adulthood. Individuals with low birth weight earn about 8% less in the adult labor market than do their counterparts with normal birth weight. Also, adults with low birth weight have elevated risks of cardiovascular disease and type 2 diabetes. The consequences of low birth weight may even be transmitted across generations. Parents who were born at a low birth weight are significantly more likely to have an infant with low birth weight and may pass on to their children some of the disadvantages associated with low birth weight.

## CHALLENGES FOR RESEARCH AND PRACTICE

An important concern for contemporary researchers and policy makers is identifying the relative importance of particular, distinct determinants of birth weight, such as parental income during pregnancy, maternal childhood

conditions, prenatal care, and nutrition. Understanding the unique benefit generated by, say, an increase in income or access to prenatal care is important in designing interventions to increase birth weights and reduce the disparities discussed above. However, it can be difficult to estimate precisely the benefits of specific inputs because women who had low incomes during pregnancy also are likely to have had disadvantaged childhoods, to have forgone prenatal care, and to have had poorer nutrition. Thus, it is frequently unclear whether an association between poverty during pregnancy and low birth weight reflects a true effect of income or the effect of correlated, unmeasured factors, such as childhood conditions and prenatal care. A central goal for research is identifying strategies (e.g., trials, natural experiments) that will generate more accurate estimates of particular underlying causes.

The large gap in birth weight between Whites and African Americans also has been debated. Because low socioeconomic status is positively associated with low birth weight and African Americans are concentrated disproportionately in lower socioeconomic categories, many argue that higher rates of low birth weight among Blacks result primarily from their socioeconomic disadvantages. When Whites and Blacks of similar socioeconomic status are compared, disparities in birth weight are reduced significantly; however, even holding income constant cannot eliminate the White-Black gap entirely. Socioeconomic explanations of racial disparities also are challenged by the Hispanic health paradox. Hispanics in the United States face several socioeconomic disadvantages. However, their rates of low birth weight are frequently lower than White rates, challenging the argument that low socioeconomic status causes low birth weight. As Hispanic immigrants become more acculturated to the United States, however, this birth weight advantage tends to decline, leading many to argue that the Hispanic health paradox reflects healthier cultures and lifestyles among recent immigrants, such as a healthier diet and a stronger network of community support.

Other researchers have proposed biological/genetic explanations for racial differences in birth weight. Although Black infants are twice as likely as White infants to be born at a low weight, Black infants have better birth-weight-specific survival rates than Whites do. In other words, African-American infants with low birth weight are more likely to survive than are comparable White infants. This has led some researchers to suggest that racial disparities in birth weight reflect a type of biological adaptation. These arguments suggest that over many generations, populations exposed to deprived environments may experience natural selection for smaller babies because in an environment of limited nutrition, smaller babies may have survival advantages related to metabolic efficiency. Overall, there is little evidence for genotypic bases of racial disparities in birth weight or racial categorizations more generally, and research in this area has been controversial.

Several unanswered questions remain about associations between birth weight and adult outcomes, including low education attainment or wages, cardiovascular disease, and diabetes. One question is whether these associations really reflect a causal effect of birth weight. Low birth weight is associated with several environmental disadvantages, and so individuals who were born at a low weight are likely to have faced a variety of challenges throughout their lives—such as a low-quality education, poor diet, and a disadvantaged neighborhood—all of which may be alternative explanations for later outcomes. Much of the research in this area is concerned with developing strategies to isolate the effects of birth weight by, for instance, comparing siblings or twins who are likely to have had similar backgrounds.

Assuming that birth weight has a causal effect on adult well-being, several questions remain about the possible pathways through which these effects work. One of the most prominent hypotheses in this area is the Barker hypothesis, which argues that environmental stressors

## BARKER HYPOTHESIS

According to the Barker hypothesis, environmental influences that impair growth and development early in life are important causes of chronic disease in adulthood. In the 1990s David Barker and his colleagues published several studies showing that individuals who were born at a low birth weight are significantly more likely to have heart disease and type 2 diabetes later in life. Those findings led Barker to hypothesize that when a fetus experiences nutritional deprivation during key stages of pregnancy, its development is altered in anticipation of postnatal scarcity (organ structure and function are "reprogrammed" to maintain metabolic thriftiness later in life). These in utero adaptations may have conferred significant survival benefits during historical periods when starvation was a serious concern. However, in the caloric abundance of contemporary industrialized nations metabolic thriftiness may increase the risk of adult diseases. The Barker hypothesis has received a great deal of attention in academia and the media and has helped popularize many life course concepts.

cause changes in fetal development that ultimately increase the risk of cardiovascular disease and type 2 diabetes. Although the Barker hypothesis provides a compelling explanation for associations between birth weight and chronic disease, it does not speak as effectively to associations between birth weight and later socioeconomic outcomes. An important ongoing research question is how different mechanisms, especially brain development, IQ, and physical health, may account for associations between birth weight and adult socioeconomic status.

**SEE ALSO** Volume 1: *Health Differentials/Disparities, Childhood and Adolescence; Illness and Disease, Childhood and Adolescence; Infant and Child Mortality.*

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***Kate W. Strully***

# BODY IMAGE, CHILDHOOD AND ADOLESCENCE

Body image is a complex multifaceted concept that generally encompasses how people perceive and feel about their physical appearance, including the weight, size, shape, or athletic ability of their bodies. Constructing one's body image typically involves the process of judging the body against socially constructed and socially learned ideals about attractiveness or beauty. These body ideals are learned over the life course (beginning sometimes as early as preschool) within the social and cultural contexts (e.g., families, countries) where daily life unfolds. Though macrotrends in body image ideals are often identifiable (e.g., the emphasis on thinness as a sign of beauty in women in most developed countries), these trends are not universal and do not influence all individuals uniformly. In particular, body concerns of boys and girls tend to emphasize different aspects of the body and tend to refer to different ideals. Boys often strive to increase their body size to conform to ideals that equate muscularity with masculinity, whereas girls often attempt to decrease body size to conform to ideals that equate being thin with being feminine.

## WHY BODY IMAGE MATTERS

Though body ideals vary between boys and girls, research (particularly studies published since 1995) has clearly demonstrated that among children and adolescents, both boys and girls, body image can be a complicated and sometimes painful issue. This is also not a small social problem. Although reliable nationally representative prevalence rates of body image problems are difficult to construe, numerous studies using diverse sampling frames and methods consistently report that a significant number of youth experience some type of body dissatisfaction. This is of concern because body image problems can have serious consequences for the physical and mental health and well-being of girls and boys.

The most common response of girls to body dissatisfaction and a desire to be thin is to engage in calorie-restrictive dieting that can lead girls to develop eating problems and disorders and can put girls at risk of obesity, stunted growth, bone-density loss, anxiety, and depression. Among boys, the desire to increase muscle mass sometimes leads to the use of weight-gain supplements and anabolic steroids. Body dissatisfaction among boys can also lead to depression (Smolak, 2004). Finally, in a culture that emphasizes antifat attitudes, the prevalence of overweight and obesity among youth is on the rise (Ogden, Flegal, Carroll, & Johnson, 2002). Overweight children often experience painful social sanctions for being overweight. Teasing overweight boys and girls about their weight can lead to higher levels of emotional distress and a higher frequency of binge eating (Neumark-Sztainer, Falkner, Story, Perry, Hannan, & Mulert, 2002). To help youth make healthy choices about eating and weight-change behaviors, one must

first understand how the fear of overweight and the desire for thinness or muscularity develop in the early life course.

**Historical and Demographic Trends** One only has to look to Hollywood to see how body ideals for girls and women have changed over time. In the 1950s, female body ideals were significantly heavier and curvier than ideals at the turn of the 21st century. The image of Marilyn Monroe starkly contrasts images of movie stars in 2008 (who are noticeably thinner and less curvaceous). This historical change in ideal female bodies is frequently commented on in the literature on body image; however, historical trends in body ideals for men are less often discussed. Some limited evidence suggests that body ideals for men, as displayed in magazines or action figures, have become increasingly muscular since the 1970s.

Though there are identifiable trends in body ideals in the United States, not all adolescents and children perceive these ideals in a uniform manner. For example, the prevalence of weight-change practices and body dissatisfaction varies significantly among adolescents of different racial and ethnic groups. In particular, African-American girls seem to have a more flexible definition of the ideal body than White girls (Nichter, 2000). Additionally, African-American boys and girls are more likely to choose a heavier ideal body type for either gender. This flexibility means that African-American girls are more likely to be satisfied with their bodies (despite being heavier on average) and, even when African-American girls do perceive themselves as overweight, they are less likely to experience negative emotional consequences.

African-American adolescents generally experience protection against negative body images, but this is not necessarily true for Asian-American or Latina girls (very little is known about Asian-American or Latino boys). A large study of adolescent weight control found that approximately 40% of Asian-American and White girls were currently dieting, compared with 33% of Latinas and 22% of African-American girls. Disordered eating was originally considered a White, middle-class problem; however, research in 2008 suggests that it is not an insignificant problem for girls of any race or ethnic group. Further, some evidence suggests that Latinas and Asian-American girls may engage in disordered-eating and experience body dissatisfaction at the same rate as white girls (Neumark-Sztainer, Story, Falkner, Teuhring, & Resnick, 1999).

**Developmental Trends** In addition to differences in body concerns among boys and girls among different ethnic and racial groups, research suggests that body concerns change as children age and as their bodies and cognitive and social abilities develop. Although research on children is limited by an inadequate ability to measure body image in early childhood, children develop the awareness that fat is *bad* sometimes as early as preschool. As children age, this knowledge is increasingly incorporated into how children evaluate their bodies and body dissatisfaction becomes more common (Ricciardelli & McCabe, 2001).

The middle-school years are a critical time in the development of body image. Both girls and boys tend to experience increased body dissatisfaction during these years (Rosenblum & Lewis, 1999). Several developmental changes may make the middle-school years more difficult for adolescents in terms of their body image. First, during middle school, adolescents' concern with how their peers view them and whether they are socially accepted generally increases. Second, physical appearance takes on new meaning and plays an important role in how adolescents experience social life in schools (Eder, Evans, & Parker, 1995). Third, puberty generally begins during the middle-school years. For girls, this can produce drastic physiologic changes that may move girls further away from normative body ideals. For boys, puberty can bring them closer to normative male ideals by causing them to grow taller and by allowing them to develop a more muscular physique. Middle-school boys, like girls, experience decreased body satisfaction, but boys tend to recover a positive body image more quickly than girls, possibly because of the different role puberty plays in bringing boys closer and girls further from gendered body ideals (Littleton & Ollendick, 2003). Though puberty usually begins in middle school, pubertal development can also vary substantially among adolescents; therefore, the timing of puberty also matters to adolescents' body images. Fitting in or standing out because of early or late maturation can exacerbate the difficulties that many boys and girls experience as their bodies change during this period (Martin, 1996).

**Limitations** In 2008 demographic and developmental research on body image provides clear evidence that body image is important to consider across groups and throughout child development, but several limitations of this research are present. First, although the focus is changing, girls have received more attention in the overall literature than boys. Second, research using rich psychological measures of body image tends to use relatively small and predominantly White samples of youth (though research is increasingly including youth from different socioeconomic, racial, or ethnic backgrounds). Currently, no nationally representative data are available that include the complex measures developed by psychologists that are the most reliable way to investigate the multidimensional aspects of body image. Third, existing measures of body image were developed for girls (primarily White) and may not have much to do with the body concerns of boys or nonWhite girls. Fourth, despite the growing awareness that body image construction

***Weight-Loss Camp.*** *Overweight teen and pre-teen boys and girls swimming at Camp Kingsmont, a weight management camp for teenagers with weight issues.* © KAREN KASMAUSKI/CORBIS.

begins in early childhood, it is not yet known how to measure body image in elementary-school aged children reliably (Smolak, 2004). Therefore, before researchers can understand the true demographic and developmental trends in body image, they must identify more ways to measure body image in different populations, and these measures should be included in nationally representative studies of children and adolescents.

### THE ROLE OF FAMILIES

Children first begin to learn body ideals in the primary context of their lives—their families. Within families, especially around mealtimes, children learn values related to food and fat. If parents express body image concerns or model behaviors, such as dieting, in front of their children, their children are more likely to experience increases in body concern. Moreover, when parents tease or express concern about their children's weights, this can harm children's emotional well-being. Parents may have good intentions, such as trying to help their child maintain a healthy body, but children's perceptions of pressure about weight can increase the likelihood that they may develop problematic negative body images.

Much of the literature on the role of families in adolescent body image has focused primarily on girls' relationships with their mothers. The research that has investigated daughters *and* sons suggests that adolescent daughters are more likely than sons to discuss weight with their mothers and to report observing mothers modeling weight-change behaviors. The book *Fat Talk* by Mimi Nichter (2000) provides a full qualitative view of what girls and their parents say about weight, bodies, and dieting and of the complex ways that parents influence their daughters. Sometimes the parents' intention is to help their daughters maintain a healthy body or to intervene when they observe unhealthy weight-loss strategies; in other instances, parents reinforce normative body ideals that equate beauty with being thin. Nichter also investigated the role of families in the construction of African-American girls' body images. She found that African-American girls receive more positive than negative comments from family members and that they experience more family and community support for

constructing their own flexible definitions and portrayals of beauty than their White peers.

## THE ROLE OF FRIENDS AND PEERS

As children age, extrafamilial relationships, particularly with friends, become an increasingly salient context where social interactions either reinforce or contradict body ideals learned in early childhood in families. Peers first begin to influence children's body image in elementary school where appearance-related teasing is often common. By adolescence, being accepted by peers takes on even greater meaning, and the opportunities and mechanisms whereby friends influence body image diversify. Fitting in to body ideals can affect how accepted or ostracized adolescents feel. The *peer appearance context* (Jones, 2004) of adolescents' daily social lives becomes an important source of information on acceptable weight and weight-control behaviors. In this context, adolescents learn weight-control behaviors by watching or talking with peers. Teasing reinforces the stigma attached to deviating from body ideals. Friends can either protect or exacerbate the drive to conform to body ideals of peers. For example, when girls have friends who practice weight control, they themselves are more likely to practice weight control and to feel pressured to lose weight.

## FAT TALK, SOCIAL COMPARISON, AND THE MEDIA

In addition to friends exerting direct pressure to lose weight, *fat talk* among girls is a common way that girls construct their image of an ideal body among their friends (Nichter, 2000). Fat talk occurs when girls discuss (or overhear other girls discussing) how fat or dissatisfied with their bodies they are. In these informal discussions, girls are expected to chime in and express their own body dissatisfaction. Disparaging one's body is often the expected norm. The result of these interactions is that girls construct an image of what is *too fat* that frequently does not correspond to medical definitions of overweight. Though fat talk can result in increased feelings of body dissatisfaction, not all girls engage in fat talk for the same reasons and a girl's motivation for participating can moderate the impact fat talk has on her self-concept. In particular, tone must distinguish between girls who express body dissatisfaction to fit in, conform, or be friendly, and girls who have internalized thinness ideals and may be on the path to eating orders or depression.

In addition to fat talk, social comparison of one's body with those of friends, peers, and representatives of ideal bodies (such as fashion models in magazines) is another way that adolescents socially construct their feelings and perceptions of their bodies. The media provides ample examples of body ideals. Frequent exposure to these idealized bodies can negatively affect the body images of children and adolescents.

Because mass media are large diffuse social institutions, how these corporations create the body images of youth involves a complex multifaceted process. Even if adolescents see media images as unrealistic or express a preference for more realistic images, their own sense of body image may still be harmed if they assume that significant others will use media images to judge them (Milkie, 1999). Importantly, not all adolescents respond to exposure to the media in the same way. Some boys and girls have personal resources, such as self-esteem or social support, which allow them to limit the extent to which they internalize (or personally believe in) the body ideals portrayed in the media. One thing that the media and social comparison with media icons does highlight is that children and youth do not learn body ideals simply in direct interactions with parents or friends. Diffuse social messages about bodies are prevalent in developed societies and even in the absence of direct pressure from significant others, these messages can be internalized. For both boys and girls, internalization of normative body ideals is a key step toward unhealthy or negative body images; therefore, understanding the circumstances under which children and youth internalize these messages is fundamental.

## SCHOOL CULTURE

Because the internalization of potentially problematic body ideals is most likely to develop within subcultures that emphasize being thin or muscular, it is crucial to investigate the primary social contexts of adolescents' lives. Family and friends are contexts that have received a lot of attention in the literature on body image; however, the role schools play in fostering adolescent cultures that affect body image has not been thoroughly investigated. As children age, schools become an increasingly salient context. By adolescence, schools serve as the primary location of adolescents' social and academic lives. Schools have long been recognized as an important venue for the formation of peer cultures with specific values and codes of behavior (Coleman, 1961; Eder, Evans, & Parker, 1995). School-based adolescent cultures are known to affect a range of adolescent values and behaviors (e.g., smoking). In fact, one of the only studies of school cultures and body image by Eisenberg, Neumark-Sztainer, Story, and Perry, (2005) found that adolescent girls who attend schools where a large proportion of the female student body practices unhealthy methods of weight control (e.g., diet pills, or laxative abuse) are more likely to engage in unhealthy behaviors themselves. Future work on body image should expand this area of

research to look at more schools across the United States (and other countries) and to include boys.

## CONCLUSION

Developing a healthy or positive body image is an important part of children's development into happy, healthy adults. Understanding how to encourage youth toward healthy lifestyles without damaging their emotional well-being is an important challenge for parents, researchers, and professionals who work with youth. Current research has clearly established that body image is not a problem that can be ignored for girls or boys, young children or adolescents. Continuing to investigate the multifaceted aspects of body image across the early stages of the life course and the complicated factors that influence how children's body images develop over this period are important steps toward creating policies and interventions that empower children to lead healthy, well-adjusted lives.

**SEE ALSO** Volume 1: *Eating Disorders; Media and Technology Use, Childhood and Adolescence; Obesity, Childhood and Adolescence; Peer Groups and Crowds; Self-Esteem; Socialization, Gender.*

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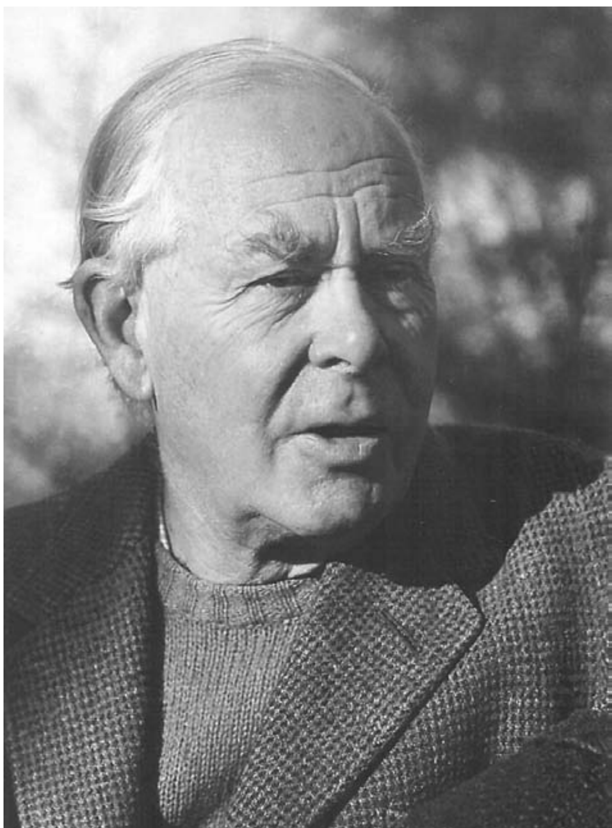
***Anna Strassmann Mueller***

# BOWLBY, JOHN
***1907–1990***

In creating attachment theory, John Bowlby, who was born in London, was guided by a unique combination of family, personal, and educational influences. After rejecting a naval career, he studied preclinical sciences and psychology (including child psychology) at the University of Cambridge from 1925 to 1928 at the suggestion of his father, an eminent surgeon. Reluctant to pursue further with medical training, Bowlby spent the year after graduation as a volunteer teacher at two progressive schools for maladjusted children. That experience convinced him that children's emotional problems frequently are linked to disruptions in early family relationships and led to his decision to become a child psychiatrist and psychoanalyst. Bowlby's painful memories of losing his favorite nanny as a young child and later being sent to a boarding school also might have played a role in his choice of profession (Holmes, 1993).

## CLINICAL WORK AND EARLY PUBLICATIONS

In 1936 Bowlby had completed his psychiatric training and began to work at the London Child Guidance Clinic, where he noticed that the symptoms for which children were referred often could be explained by probing their parents' childhood experiences. His concurrent training as a child analyst under the supervision of Melanie Klein was filled with tension because of his strongly held view that actual relationships, not internal drives, are



***John Bowlby.*** **SIR RICHARD BOWLBY.**

the instigators of children's emotional disturbances. When Bowlby's work with children was interrupted during World War II, he gained expertise in experimental design and statistics as member of a group of army psychiatrists and psychologists charged with improving officer selection procedures. That training is evident in the quasi-experimental design of a seminal study linking children's stealing behavior to early family disruptions (Bowlby, 1944).

In 1945, as director of the department for parents and children at the Tavistock Clinic in London, Bowlby founded a research group to study the responses of young hospitalized and institutionalized children experiencing long-term separation from their parents. The results of that study, along with the documentary film *A Two-Year-Old Goes to Hospital* (1952) by Bowlby's collaborator James Robertson, contributed to the liberalization of hospital visiting rules for parents. Based on that work, the World Health Organization (WHO) commissioned Bowlby to write a research-based report on the well-being of homeless children in postwar Europe. The report concluded that to facilitate healthy development, "the infant and young child should experience a warm, intimate, and continuous relationship with his mother (or permanent mother substitute) in which both find satisfaction and enjoyment" (Bowlby, 1952, p. 13).

## LATER WORKS AND THEIR RECEPTION

Seeking theoretical grounding for his recommendations, Bowlby searched the literature on ethology, evolutionary biology, cybernetics/systems theory, information processing, memory, the emotions, and developmental psychology. His goal was to reinterpret psychoanalytic views of human relationships in light of contemporary science. However, in 1958, when Bowlby presented his first version of attachment theory to the British Psychoanalytical Society, the reception was hostile. Undeterred, he expanded his early theorizing into the trilogy *Attachment and Loss* (1969, 1973, 1980). In those volumes he showed an unusual ability to recognize cutting-edge ideas before they gained general acceptance.

In *Attachment* (1969) Bowlby reviewed research on social bonds in birds and primates to propose that fleeing to an attachment figure when frightened and using that figure as a secure base for exploration increases an infant's survival chances. He also contended that an attachment figure's prompt and appropriate responsiveness to a child's expression of fear or distress engenders a more secure, trusting, and happy relationship that fosters the growth of self-reliance. His argument relied on Mary Ainsworth's 1967 short-term longitudinal studies of infant–mother attachment in Uganda and her then-unpublished work in the United States. Their collaboration had begun in London in 1945.

In *Separation* (1973) Bowlby stressed that young children experience fear not only in the presence of unlearned and cultural "clues to danger" but also in the absence of an attachment figure. He regarded the systems controlling escape and attachment behaviors as distinct members of a larger family of stress-reducing and safety-promoting systems whose function is to maintain an organism within a defined (safer) relationship to its environment. Additionally, he proposed an epigenetic model of healthy and unhealthy developmental pathways from infancy to adulthood, drawing on the work of C. H. Waddington (1957). He also noted the link between secure attachment and warm but limit-setting parenting styles during early and later childhood.

In *Loss* (1980) Bowlby fleshed out ideas on the role of representation (internal working models) in relationship functioning and personality development, a topic he had introduced in the first two volumes. In the context of discussing clinical case studies of bereavement, he presented tentative ideas about the distortion of representation by

defensive processes, building on emerging findings on cognition and memory.

The initial impact of attachment theory on developmental psychology was due largely to the empirical work of Mary Ainsworth and co-workers. However, as attachment research moved beyond infancy, Bowlby's trilogy began to exert a more direct influence. This is evident in longitudinal attachment studies from birth to young adulthood in the United States, Germany, and Israel. It is also evident in research on attachment representations in children, parents, and couples as well as in a growing number of clinical studies (see Cassidy & Shaver, 2008).

Partly as a result of changes in societal norms, Bowlby has been criticized for excessive emphasis on the maternal role, insufficient attention to fathers, and devaluation of women's work outside the home. Studies on child–father attachment and the effects of nonfamilial child care instigated by these criticisms have refined and expanded his theory. Promising new avenues for attachment research are also opening up in affective and social neuroscience.

**SEE ALSO** Volume 1: *Attachment Theory; Parent-Child Relationships, Childhood and Adolescence; Parenting Style.*

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***Inge Bretherton***

## BREASTFEEDING

Infancy is the first and most vulnerable stage of the life course of the child and a significant passage in the life course of the mother. Because they occur at this critical juncture, decisions about infant feeding reflect concerns about optimizing infant and child health but also about dividing familial roles and resources and negotiating the cultural norms for what constitutes a good mother. Although current medical opinion unanimously endorses breastfeeding over bottle feeding, social researchers, who view breastfeeding as a sociocultural as well as biological process, disagree about the importance of breastfeeding in contemporary society for both mothers and children.

### HISTORICAL BACKGROUND

Historically, breastfeeding often symbolized a mother's moral duty to her child and to the larger society. In the eighteenth and nineteenth centuries, for example, maternal breastfeeding was part of new democratic values and was thought to instill strength and virtue in the nation's future citizenry. Nonetheless, alternative practices such as wet nursing (hiring a woman other than the baby's biological mother to breastfeed the infant) and bottle feeding with animal milk or other foods continued because circumstances could make maternal breastfeeding difficult or impossible but also because some groups, particularly in the affluent classes, retained strong cultural preferences against it (Fildes, 1986). By the early 20th century, however, cultural prescriptions for the good mother shifted and breastfeeding rates declined as public sanitation, hygienic water and supplies of cow-milk, and the prestige of science made physician-prescribed infant formulas the more appealing, modern practice (Apple, 1987).

The late 20th century marked the revival of breastfeeding prescriptions, a turnaround in rates, and, somewhat paradoxically, the extension of medical authority over what had been the less medicalized, less modern practice. Authority over other aspects of childbearing and child rearing had shifted a century earlier, particularly

for the middle class, from kin and religious leaders to medical professionals for the final word on what was best for child and mother. Christian groups aiming to strengthen the traditional family against scientific authority first embraced natural birth and breastfeeding in the 1940s and 1950s, but resistance to medicalization grew with the 1960s back-to-nature ethos and feminist demands for woman-centered health care (Blum, 1999). With increased scientific understanding of the immunological properties of human milk, the partial incorporation of feminist demands into hospital birthing, and the involvement of the U.S. government in breastfeeding promotion, medical authority became predominant. Thus, social research on breastfeeding is an outgrowth of the critical feminist response. However, although there is a shared sociocultural perspective, the recent surge in social research on breastfeeding is divided on the validity of medical claims, the role of government, and whether breastfeeding among all mothers should be prioritized by feminists and sociologists.

## A SIDE NOTE ON GLOBAL ISSUES

The movement toward breastfeeding in the United States, Britain, and other developed nations spurred controversy over the use and rampant promotion of formula in developing nations. The severe risks to infants and children in forgoing breastfeeding amid poverty, contaminated water, and unsanitary conditions have led to repeated international protests against formula producers as well as international agreements under the auspices of the World Health Organization and the United Nations Children's Fund (UNICEF) to promote breastfeeding and restrict the marketing of substitutes (Dykes, 2007). However, social scientists point out that breastfeeding is not free or without consequences (Blum, 1999; Carter, 1995; Smith, 2004). In conditions of scarcity lactation can compromise mothers' nutritional status and ability to perform household and paid work, and this can put the entire family and the nursing baby at risk. Breastfeeding is always more than its product, human milk; it is a social practice involving trade-offs of women's time and activities.

## MEDICAL RESEARCH: IS BREAST BEST?

The health risks to children of advanced nations in forgoing human milk are less clear, leaving social research divided. The current American Academy of Pediatrics recommendation, which is supported by other medical professionals, is that mothers should breastfeed for a minimum of 1 year (i.e., using no formula or other milks), the first 6 months exclusively, as the only source of infant nutrition (AAP 2005). The U.S. government promotes this standard, as it has set steadily increasing national goals. The goals for 2010 are for a 75% initiation rate, 50% at 6 months, and 25% at 1 year (U.S. Department of Health and Human Services, 2003). Rates over time have responded to such campaigns but continue to fall below targets. Initiation rates in the first decade of the 21st century were about 70%, with just over a third of mothers still breastfeeding at 6 months, and less than 20% at 1 year. Moreover, many mothers rely on formula; by 3 months 30 to 40% of breastfeeding mothers are supplementing (in addition to the 30% who never breast-fed), and at 6 months less than 15% report relying on breast milk alone (Centers for Disease Control and Prevention, 2007). This rapid turn to formula supplementation indicates that most mothers attempt to breastfeed, but for a number of reasons, the standard of using breast milk exclusively is unrealistic. Rates for the United Kingdom and Australia are similar, with high drop-off and supplementation rates (Lee, 2007; Murphy, 1999; Bartlett, 2005).

The most well established benefits of human milk include decreased risk for common ear, respiratory, and gastric-diarrheal infections among infants and young children (Centers for Disease Control and Prevention, 2007; U.S. Department of Health and Human Services, 2003). The evidence for more dramatic claims—reduced risk of childhood cancers, sudden infant death syndrome, diabetes, and lifetime obesity, along with a higher IQ—is equivocal. Although many social researchers appear to accept medical claims without skepticism, several have raised important criticisms.

The sociologist Linda Blum, as part of a larger ethnographic study, examined 30 years of late-20th-century infant-feeding advice, finding that it oversimplifies complex results and thus exaggerates the benefits of breastfeeding. She also noted that because breastfeeding rates are correlated strongly with income, education, and race, the distinct contribution of breast milk to infant and child health is difficult to determine even with advanced statistical techniques because researchers do not yet understand the myriad ways in which social advantage is health-enhancing (Blum, 1999).

Jules Law (2000) found that much medical research is flawed because unexamined normative assumptions favoring the gendered division of care giving are conflated with breastfeeding. Some research on breast versus formula feeding has used infant hospitalization as an outcome variable, ignoring the tendency of physicians to assess breast-fed babies with full-time mothers as better cared for and thus better off at home compared with formula-fed babies with other caregivers. Thus, formula feeding may be associated with higher rates of hospitalization but not higher rates of illness. Such circular studies also have claimed that breastfeeding leads to

mother-child bonding when it is used as both an outcome and a presumptive indicator of bonding. Though retained by breastfeeding advocates, this notion of bonding—of a critical early stage in which separation from the mother causes children's pathology—was based on questionable analogies from studies of war orphans and monkeys and was discredited by subsequent research (Blum, 1999; Eyer, 1992).

## PUBLIC HEALTH: SHOULD MOTHERS BE MANIPULATED?

The sociologist Joan Wolf (2007) has shown that medical journals are riddled with conflicting findings on breastfeeding; she demonstrated how this equivocal research may be misused by breastfeeding promotion campaigns under government sponsorship. The American Public Health Association Code of Ethics states that public health, in its tapping of public resources and intent to change behavior, should address only fundamental causes of disease. However, formula feeding in advanced nations has not been shown to be a primary cause for any known disease; therefore, according to Wolf, it should not be interpreted as a danger to children.

Other social researchers also take issue with the public health approach, citing its role in creating unnecessary guilt on the part of bottle-feeding mothers for the implied lack of care for their children (Dykes, 2007). In a longitudinal qualitative study the British sociologist Elizabeth Murphy found that the obligation to follow expert advice is profoundly moral, heightened by the maternal imperative to place children's interests first; thus, bottle-feeding mothers experience stigmatized, deviant identities (Murphy, 1999). In a related survey, Ellie Lee found a large minority of mothers reporting guilt, failure, uncertainty, and worry about the harm done by formula feeding; mothers who had planned to breastfeed but found it difficult after complicated births reported the most distress (Lee, 2007). Murphy, Lee, and Wolf built on the sociology of risk, which has shown that that even well-informed publics misunderstand risk calculation and probabilistic statements of likelihood, translating imperfect options such as bottle versus breast into absolutes of ''hazard or safety'' (Wolf, 2007, p. 613). Moreover, ''bombarded with [expert] advice about how to reduce their risk of everything,'' most take personal, individual responsibility for problems with persistent social roots (Wolf, 2007, p. 612).

Social researchers largely agree that most obstacles to breastfeeding are social and that such obstacles should be changed to avoid blaming individual mothers. Changing workplace policies that limit mothers' ability to combine labor force participation and infant care are a clear priority, particularly in the United States with its lack of nationally guaranteed paid family leave. For some, such reforms should aim to enlarge the range of positive care giving choices for mothers and families rather than increase breastfeeding rates; but others argue for policy change primarily so that more mothers will breastfeed.

***Breastfeeding Protest.*** *Lisa Pierce Bonifaz, of Boston, breastfeeds her 11–week old baby Marisol during a breastfeeding protest near the Delta Airlines ticket counter in Boston's Logan International Airport. Mothers were there to protest the removal of a nursing mother from a Delta commuter flight in Burlington, VT.* AP IMAGES.

## SHOULD BREASTFEEDING BE THE PRIORITY?

Two Australian political economists have contributed significantly to policy arguments. Judith Galtry argues for policies based on the International Labor Organization's Maternity Protection Convention; in addition to paid leave, this includes flexible work programs and paid breastfeeding breaks during the workday. Comparing the high, moderate, and low breastfeeding nations of Sweden, the United States, and Ireland through a review of

quantitative studies, Galtry discovered that only Sweden's generous paid leaves, along with its many gender equity measures, raise both breastfeeding initiation and duration rates (Galtry, 2003). Julie Smith argued somewhat differently for changed incentive structures, calculating that if human milk were given a market value that included mothers' labor and consumption costs, mothers no longer would be compelled to choose the ostensibly cheaper formula (Smith, 2004). However, Galtry ignored larger factors that contribute to "Sweden's enviable child health statistics" (Galtry, 2003, p. 174), notably generous antipoverty and universal health care measures. Smith echoed manipulative, fear-inciting rhetoric with her contention that "artificial [i.e., formula] feeding is the tobacco of the 21st century" (Smith, 2004, p. 377).

Contemporary cultural studies scholarship on breastfeeding similarly argues for prioritizing breastfeeding, exaggerating its contribution to infant and child health and the risks posed by bottle feeding. Such studies analyzing popular culture, however, add that priority be given to breastfeeding for mothers to increase their sensual pleasure, empowerment, and resistance to having their bodies thought of as sex objects (Bartlett, 2005). Following earlier sociological work (Blum, 1999; Carter, 1995), cultural studies confirm that norms for women's sexual bodies pose another major obstacle to breastfeeding. That is, contemporary norms of heterosexuality define breasts as objects of display for the male gaze. Though infant-feeding advice trivializes mothers' embarrassment and counsels learning to nurse discreetly, numerous instances of mothers being sanctioned for public breastfeeding demonstrate that the conflict between maternal breasts and sexualized breasts is an obstacle with social, not individual, roots. Laws in several nations protect public breastfeeding, removing it from categories of lewd and lascivious or indecent conduct, yet the sight of maternal breasts continues to threaten strongly held cultural norms (Bartlett, 2005; Blum, 1999, 2005). Thus, cultural scholars argue for breastfeeding as a "creative corporeal model" for women's empowerment (Bartlett, 2005, p. 178).

## RACE AND CLASS DIFFERENCES?

Cultural scholars who contend that breastfeeding can be empowering and pleasurable for all mothers often write about their own experience, noting but discounting the fact that they mother within privileged social locations (Bartlett, 2005; Hausman, 2004). Many sociologists, in contrast, question whether breastfeeding is objectively the best choice for all mothers and their children (Blum, 1999; Carter, 1995; Law, 2000; Lee, 2007; Murphy, 1999). Qualitative studies consistently find that institutional and cultural obstacles loom larger in the lives of lower-income mothers who confront more stressful lives, competing health and family needs, rigid workplaces, and scarce privacy, with single mothers being particularly vulnerable. Middle-class women also find breastfeeding difficult, chaotic, and autonomy-compromising (Blum, 1999; Carter, 1995; Dykes, 2007; Lee, 2007; Murphy, 1999).

Nonetheless, public health officials repeatedly assume that less-privileged mothers must be ill informed in light of their lower propensity to breastfeed (Centers for Disease Control and Prevention, 2007; U.S. Department of Health and Human Services, 2003). Ethnographic studies strongly suggest that this assumption is false; Blum (1999) and Carter (1995) demonstrated that working-class mothers are just as informed and concerned with what is best for their children as middle-class mothers. In addition to these obstacles, Blum found that African-American low-income mothers often chose not to breastfeed to resist racist legacies that cast them as close to nature, ostensibly oversexed, and in need of monitoring (Blum, 1999). Bartlett has argued similarly for Australian aboriginal women, who, particularly when migrating to urban areas, confront racialized stereotypes and scrutiny of their mothering practices, leading to lower rates of breastfeeding (Bartlett, 2005).

## FUTURE RESEARCH: AT THE BREAST OR AT THE PUMP?

For many mothers in contemporary society, infant feeding at the breast has been melded with experience with the pump, a manual or electric device to speed the expression of breast milk. Breast pumps are ubiquitous in advice and public health literature, portrayed as a handy tool for mothers returning to the workplace and other everyday activities while providing the very best for their babies. The limited research on their use suggests that most women find breast pumping unpleasant, time-consuming, physically draining, and professionally compromising (Blum, 1999; Dykes, 2007). Blum noted the irony of public discussion increasingly collapsing the *natural* practice of feeding at the breast with mothers at the pump. Future research should focus more centrally on this phenomenon, which challenges depictions of breastfeeding as a creative corporeal model of womanly empowerment as well as of intimacy and attachment between mother and child. Breast pumping may offer a positive option for partners who share parenting (Dykes, 2007); however, Blum found that African-American mothers who relied on kin networks tended to reject breastfeeding because of reliance on this unpleasant practice (Blum, 1999).

Future research also might expand on Galtry's cross-national comparisons of infant-feeding norms and practices. Although it is important to compare developing

nations to ameliorate high infant mortality, comparing advanced nations may shed greater light on the efficacy of varied forms of policy support for diverse families and care giving arrangements. Social movement researchers also might compare breastfeeding activism within advanced nations. Although voluntary organizations dedicated to breastfeeding support have been scrutinized (Blum, 1999), little attention has been paid to recent breastfeeding demonstrations, the public "nurse-ins" of U.S. "lactivists" (Blum, 2005) and Australian "breast-fests" (Bartlett, 2005). Equally compelling are questions of why breastfeeding activism in other advanced nations focuses more centrally on antiglobal, anticorporate efforts.

Social research on breastfeeding reflects continuing concerns for children's health and well-being. However, it also reflects concerns about changing gendered divisions of caregiving and questions about which women can be good mothers who contribute to the nation's future.

**SEE ALSO** Volume 1: *Attachment Theory; Illness and Disease, Childhood and Adolescence; Infant and Child Mortality; Parent-Child Relationships, Childhood and Adolescence.*

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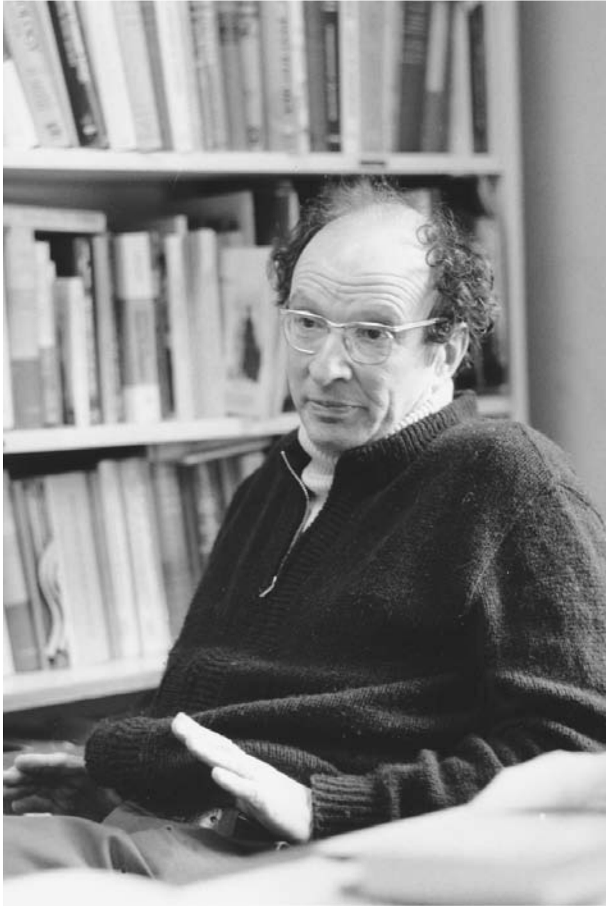
# BRONFENBRENNER, URIE

***1917–2005***

Urie Bronfenbrenner, a developmental psychologist, changed the way in which scientists theorize about and conduct research in human development. In his formulation of the bioecological theory of human development, he developed a theoretical paradigm that emphasized the dynamic relations between the individual and a multileveled ecological context. His emphasis on theory, multidisciplinary scholarship, research designs that both test as well as formulate hypotheses, and the interplay between science and policy has powerfully transformed research in human development and its application in programs serving children and families.

Bronfenbrenner was born in Moscow and came to the United States at the age of 6. He settled with his parents in a small town in upstate New York, where his father, a neuropathologist, worked at the New York Institution for the Mentally Retarded. In 1934 he attended Cornell University and majored in psychology. At the time, the field of psychology was dominated by lab experimentation and defined the individual in terms of a set of unconnected, maturationally based systems such as sensation, perception, emotion, and motivation. It was not until he met Frank Freeman (1898–1986) at Cornell that Brofenbrenner's training supported a developmental model integrating genetically based characteristics and the environment. Under Freeman's



*Urie Bronfenbrenner.* AP IMAGES.

mentorship, Bronfenbrenner went on to receive his M.A. from Harvard under Walter Fenno Dearborn (1878–1955), followed by a Ph.D. in developmental psychology from the University of Michigan. Literally 24 hours after completing his Ph.D., he was inducted into the U.S. Army. As part of a unit of the Office of Strategic Services (now the Central Intelligence Agency), he met psychologist Kurt Lewin (1890–1947) and several other leading scientists. With Lewin, Bronfenbrenner received what he believed was his true graduate training by spending the evening hours singing songs and thinking about human behavior and development. Following World War II (1939–1945), Bronfenbrenner was briefly at the University of Michigan before taking a joint professorship in psychology at the then-named College of Home Economics at Cornell University. At his death, Bronfenbrenner was the Jacob Gould Schurman Professor Emeritus of Human Development and of Psychology in the College of Human Ecology at Cornell University.

Bronfenbrenner is probably best known for the bioecological model of human development, in which the individual is conceptualized as developing within "a set of nested structures, each inside the next, like a set of Russian dolls" (Bronfenbrenner, 1979, p. 3). Bronfenbrenner's theories moved the field from the study of "the science of the strange behavior of children in strange situations with strange adults for the briefest possible periods of time" (p. 19) to the study of individuals in the natural contexts in which development occurs.

In his groundbreaking 1979 book, *The Ecology of Human Development*, Bronfenbrenner described four interrelated ecological levels: (a) the micro-system, which contains the developing individual, such as the family unit; (b) the meso-system, the interrelationships between micro-systems, such as the link between the home and school context; (c) the exo-system, those contexts that do not directly involve the developing person but have an influence on the micro-system, such as parents' place of employment; and (d) macro-systems, the highest level of the ecological model, involving culture, policy, and other macro-institutions that create consistency in the underlying systems. In later versions of the model (Bronfenbrenner & Morris, 2006), he directed attention to characteristics of the individual person—biology, psychology, and behavior—that underlie individual development, as, in his words, there came to be "too much [research on] context without development" (Bronfenbrenner, 1986, p. 288). He incorporated the contexts that were typically the domain of other social science disciplines and, in linking them to the individual, invited interdisciplinary scholarship on human development across the life course.

Bronfenbrenner highlighted four defining properties of the bioecological paradigm: process, person, context, and time (PPCT). Proximal processes, or the interactions between individuals and persons, objects, or symbols in their environment, were conceptualized as the "engines of development." In influencing development, they are thought to vary as a function of characteristics of the person, the immediate or distal context, and across time. This model is dynamic in nature. It incorporates the notion of time at the micro-, meso-, and macro-levels and has the individual as both a producer of change in developmental processes (through effects on proximal processes) and a product of the process of development. In short, the model nests the individual in an ecological framework but considers change in development as a function of the exchanges between the individual and an actively changing context.

With a framework that highlights the plasticity of development in the context of risk, Bronfenbrenner was a long supporter of integrating research with practice to improve the human condition. He was one of the

founders of Head Start, the nation's largest federally sponsored early childhood development program providing comprehensive programming to low-income preschool children. As he has described quite eloquently, science should inform policy and vice versa. To Bronfenbrenner, his theoretical and policy focus were as mutually reinforcing as the dimensions of his ecological model. His call to action pervades his writings: "The responsibilities of the researcher extend beyond pure investigation, especially in a time of national crisis. Scientists in our field must be willing to draw on their knowledge and imagination in order to contribute to the design of social interventions: policies and strategies that can help sustain and enhance our most precious human resources—the nation's children" (1988, p. 159).

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***Pamela Morris***

# BULLYING AND PEER VICTIMIZATION

In the decade since the highly publicized school shootings of the late 1990s, school bullying has received increased attention from scholars, journalists, and school administrators. However, significant research had already accumulated well before the shootings at Columbine High School in Colorado in 1999. Dan Olweus (1978) is widely considered to have founded the subfield in the late 1970s, partly in response to the highly publicized suicide of a victim of bullying. Unfortunately, there are many tragic bullying stories, and their consequences are a significant part of why it is important to study. Even so, bullying stands out as a research topic not only because of its horrific consequences but because of its paradoxical nature. It is ubiquitous, yet mysterious: ubiquitous in that it is unlikely that a primary or secondary school student makes it through the day without at least witnessing a bullying event, but mysterious in that the motives for bullying are difficult to discern—often for the bullies themselves—and the benefits obtained unclear.

With contributions from psychology, sociology, education, public health, and other social sciences from across the industrialized world, research on bullying is diverse with respect to both discipline and nationality. The language barriers of the latter are trivial when compared with the former, so one might expect chaos. Instead, a relatively high degree of consensus exists in bullying research, particularly with regard to its consequences and the profiles of victims. However, some areas of confusion remain, including definitions, the role of race, the social status and mental well-being of bullies, and the extent to which it is instrumental (i.e., done in order to achieve some desired, immediate outcome) or pathological. This entry discusses both consensus and confusion, beginning with definitions and measures of bullying, followed by a theoretical overview and concluding with promising new directions.

## DEFINITIONS OF BULLYING

Espelage and Swearer (2003), in their review of the literature, point out that "perhaps, the most challenging aspect of bullying prevention programming is reaching a consensus on a definition of bullying" (p. 368). There are nearly as many definitions as there are researchers, but many are variations of the one proposed by Olweus (1978, 1993), who defined bullying as "engaging in negative actions against a less powerful person repeatedly and over time." However influential this definition, in practice, measuring relative power is difficult and often circular: Researchers may only know if one student is less powerful than another if the former has already been victimized by the latter. An additional limitation concerns the requirement that the abuse be both repeated and enduring: A student who pours milk on a classmate in the cafeteria need not repeat the act for it to have lasting consequences.

Kenneth Rigby (2002), another leader among researchers on bullying, has combined elements from several definitions: "Bullying involves a desire to hurt + hurtful action + a power imbalance + typically repetition + an unjust use of power + evident enjoyment by the aggressor and generally a sense of being oppressed on the part of the victim" (p. 51). If all these elements must be present, this definition becomes even more restrictive. Tattum and Tattum (1992) conceived of bullying as a

"willful, conscious desire to hurt another and put him/her under stress," although perhaps this definition goes too far in the other direction because even thinking about harming another person would qualify. What virtually all definitions of bullying have in common is that it represents intentional harm and is one sided. Additionally, the consensus is that it can involve a wide range of behaviors, generally categorized as physical aggression, direct verbal abuse, and indirect or relational aggression (which includes spreading rumors and ostracism).

## MEASURING BULLYING

Researchers use diverse methods to measure bullying, coding behaviors they observe directly, asking subjects to report their own involvement, or asking teachers, parents, or peers to report on the behaviors of subjects. Naturally, the choice of method is likely to influence results inasmuch as they address, or fail to address, two key obstacles to accurate and unbiased measurement of bullying: social desirability bias and stereotype. Concerning the former, many roles are unappealing to either parents or teens, but the bully is unusual for the low regard in which he or she is held by both. Powerful or popular though they may be, bullies are invariably portrayed by the media as cowardly, insecure, and disliked. This is evident not just in popular culture but also in academic studies describing clusters of aggressive, popular pupils who are also widely disliked (e.g., Farmer, Estell, Bishop, O'Neal, & Cairns, 2003). Desirability bias can lead to underreporting, and studies that compare bully and victim reports have found results consistent with this scenario (Veenstra et al., 2007).

The second obstacle to accurate measurement is a stereotypic view of bullying as direct aggression. One study of pupils' definitions found that they were often limited to overt aggression (Naylor, Cowie, Cossin, de Bettencourt, & Lemme, 2006) and another found that less than 20% of pupils identified indirect or psychological abuse as bullying (Boulton, 1997). For schoolchildren, the term *bully* is strongly associated with direct aggression and substantially less so with indirect aggression (Smith, Cowie, Olafsson, & Liefooghe, 2002). For these reasons, approaches relying exclusively on self-reports or those that use the term *bully* are less than ideal, although they have the advantages of ease of administration and comparability across studies.

Surveys with multiple informants are probably the most accurate, however. Some ask teachers to rate students, but teacher accuracy is often low (Leff, Kupersmidt, Patterson, & Power, 1999) and varies according to the teachers' attention to the problem and opportunities to observe it. Accuracy may improve when students themselves are asked about their classmates' behaviors. Some studies ask each student to nominate a (generally fixed) number of bullies, whereas others ask them to rate *all* their classmates on their aggressive behaviors, both of which produce consistent and accurate measures.

## CAUSES

Despite the diversity of contexts and focal variables, much of the literature on bullying can fit into what might be labeled an individual-pathological framework, which suggests that bullying is a consequence of mental health problems such as depression, anger, anxiety, low self-esteem, or low empathy. Researchers have found that bullies have significantly lower self-esteem than bystanders (O'Moore & Kirkham, 2001), are more depressed (Roland, 2002), and have lower global self-worth, scholastic competence, social acceptance, and greater behavioral conduct problems (Austin & Joseph, 1996).

However, other studies have found no significant differences in self-esteem between bullies and bystanders (Olweus, 1993) and still others have found that bullies have *higher* self-esteem or that bullying enhances self-regard (Kaukiainen et al., 2002; Rigby & Slee, 1992). These findings pose a significant challenge to the individual-pathological model, but other weaknesses play a part as well. The social psychological processes by which some depressives, for example, become bullies and others victims are generally not specified, nor are broader contextual factors taken into consideration. These contextual factors are important, particularly to the extent that they influence both bullying and mental health.

To that end, some researchers have focused on factors that operate at the family, peer, or higher levels of aggregation. The theoretical frameworks applied at these levels are diverse. Some can be labeled transitive models, which suggest that adolescents who are abused abuse others in turn. This argument is most common at the family level, where it is found that parents who are aggressive or neglectful, use corporal punishment, or engage in serious conflicts are more likely to have children who bully (Smith & Myron-Wilson, 1998). They also operate at the peer level, as evidenced in some accounts of *bully-victims*, whose aggression is a response to victimization.

Other studies approximate classic criminological theories such as social control or social learning theory. Social influence, the key component of social learning theory, is seen as an explanation for patterns of homophily, by which bullies are friends with other bullies, which are observed in adolescent friendship networks (Mouttapa, Valente, Gallaher, Rohrbach, & Unger, 2004). In fact, a longitudinal study of sixth through eighth graders found even stronger homophilic effects for bullying than for other aggressive behaviors (Espelage

***Victim of Bullying.*** *The motives for bullying are difficult to discern.* GALE, CENGAGE LEARNING.

& Holt, 2001). Other studies adopt, at least implicitly, variants of social control theory, suggesting that weak attachments to school, for example, may lead to aggressive behavior (DeWit et al., 2000). Despite the value of social ecological approaches, few studies have included factors operating in multiple contexts.

Although these theoretical frames have expanded the horizons of bullying research, they share with their psychological counterparts an implicit view of bullying as pathological. They generally ignore the possibility that bullying is instrumental in enhancing and maintaining status and are difficult to reconcile with other findings that bullies are often popular among their peers. In contrast, some researchers (Hawley, Little, & Card, 2007; Pelligrini & Long, 2002) argue that bullying is, at least in part, designed to accomplish social goals. One study found that target characteristics influenced the status gains obtained from bullying, as boys who bullied other boys won more prestige than those who tended to bully girls (Rodkin & Berger, in press).

## THE DEMOGRAPHICS OF BULLYING

As already indicated, theories of bullying are often only implied, and many studies have produced findings that are unattached to any particular perspective. Gender is perhaps the only variable universally included in studies of bullying. Generally, boys are more likely than girls to bully their peers (Nansel, Overpeck, Haynie, Ruan, & Scheidt, 2001; Olweus, 1993), although it is possible that some of this effect is due to de-emphasis of relational aggression, in which girls are as likely, or more likely, to engage (Crick, 1996). Relational aggression is a form of bullying whereby rumors, ostracism, and similar tactics are used to destroy or damage the relationships, reputations, and social status of peers.

In comparison with gender, research examining the role of race in bullying is relatively slim and offers mixed results. Studies from outside the United States often find no racial significant differences in bullying or victimization (Boulton, 1995; Smith et al., 2002), though some have found that minorities are more likely to be victimized (Rigby, 2002; Wolke, Woods, Stanford, & Shulz, 2001). One national study in the United States found that African American students were less likely to be victimized (Nansel et al., 2001). It seems likely that the broader racial context is more important for bullying than the racial or ethnic background of particular individuals.

Most research has focused on children and adolescents in elementary or middle school rather than high school. The studies that have incorporated subjects from all levels of education have generally found that bullying increases over the course of elementary school, peaks in middle school, and then slowly declines in later adolescence (Smith et al., 2002).

## CONSEQUENCES

Although the causes of bullying remain unclear and contested, its consequences for victims are unfortunately all too clear. Victimization by bullies has been linked to most mass-casualty school shootings over the past two decades (Vossekuil, Fein, Reddy, Borum, & Modzeleski, 2002). Victimization is also significantly related to suicidal ideation (Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999), social isolation (Hodges & Perry, 1999), anxiety and depression (Baldry, 2004), low self-esteem (O'Moore & Kirkham, 2001), physical health problems (Ghandour, Overpeck, Huang, Kogan, & Scheidt, 2004), and diminished academic performance and school attachment (Woods & Wolke, 2004). Many of these effects can last well into adulthood.

It is not only the victims who suffer negative consequences from bullying. Most studies distinguish among victims, pure bullies, and bully-victims. For most

outcomes, bully-victims are at least as likely to suffer negative consequences as pure victims and are often worse off. However, bullies also experience difficulties. Aside from their increased likelihood of mental health problems (which are generally viewed as precursors but rarely tested longitudinally), they face increased risk of criminal convictions later in young adulthood (Olweus, 1993) and are also more likely to have difficulty maintaining positive relationships as adults (Rigby, 2001).

### FUTURE DIRECTIONS

Several promising new directions for bullying research have opened up. First, scholars are increasingly committed to the consideration of multiple factors operating in multiple contexts. This trend is likely to culminate in the application of Bronfenbrenner's (1979) social ecological framework, which emphasizes the interaction between contexts as much as the contexts themselves. However, data for such efforts remain scarce.

Second, social network methods, by which students nominate those whom they bully and those who bully them, have recently been applied to bullying (Rodkin & Berger, in press; Veenstra et al., 2007). Social network analysis offers several advantages over prior approaches. First, it easily incorporates multiple perspectives on a relationship, thus mitigating reporting bias. Second, it allows for sophisticated analyses at both the individual and aggregate levels. Blockmodeling, for example, categorizes individuals based on *whom* they bully, not just *whether* they bully. Compared with simple aggregate prevalence rates, network data provide more nuanced information such as centralization and structure. Most important, network data raise a host of new questions about who bullies whom. The prevalence of intergender and interracial bullying, for example, should be of great theoretical and practical interest.

Finally, the increasing commitment of schools toward bullying prevention provides unique opportunities for experimental intervention designs. The Olweus Bullying Prevention Program (Olweus, 2005) is among the most widely used and has been shown to significantly reduce bullying. However, these results are based on a small number of experimental tests, and a meta-analysis of school interventions (including the Olweus program) found that very few had any significant effects, those that were found did not last long, and effects generally did not extend to all groups (Vreeman & Carroll, 2007). Another randomized experimental design found significantly greater declines in victimization in the treatment schools, although the prevalence of bullies was not significantly different (Jenson & Dieterich, 2007). Substantial work remains to be done in the area of prevention. Thus, although network data and social ecological approaches may be pushing the field toward significant new insights, they will be incomplete, if not hollow, if they are not used to improve the lives of children and adolescents.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Friendship, Childhood and Adolescence; Peer Groups and Crowds; School Violence.*

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***Robert Faris***

# C

## CANCER, CHILDHOOD AND ADOLESCENCE

**SEE** Volume 1: *Illness and Disease, Childhood and Adolescence;* Volume 3: *Cancer, Adulthood and Later Life.*

## CHILD ABUSE

All people experience some negative events in their childhood. At what point do unpleasant experiences cross the line into abuse? Child abuse can be divided into three major areas: emotional, physical, and sexual. All forms of abuse can have negative consequences on child development, with the impact lasting into adulthood. Although there are no clear-cut criteria for what constitutes abuse, the behaviors that meet legal and psychological definitions are discussed for all three areas.

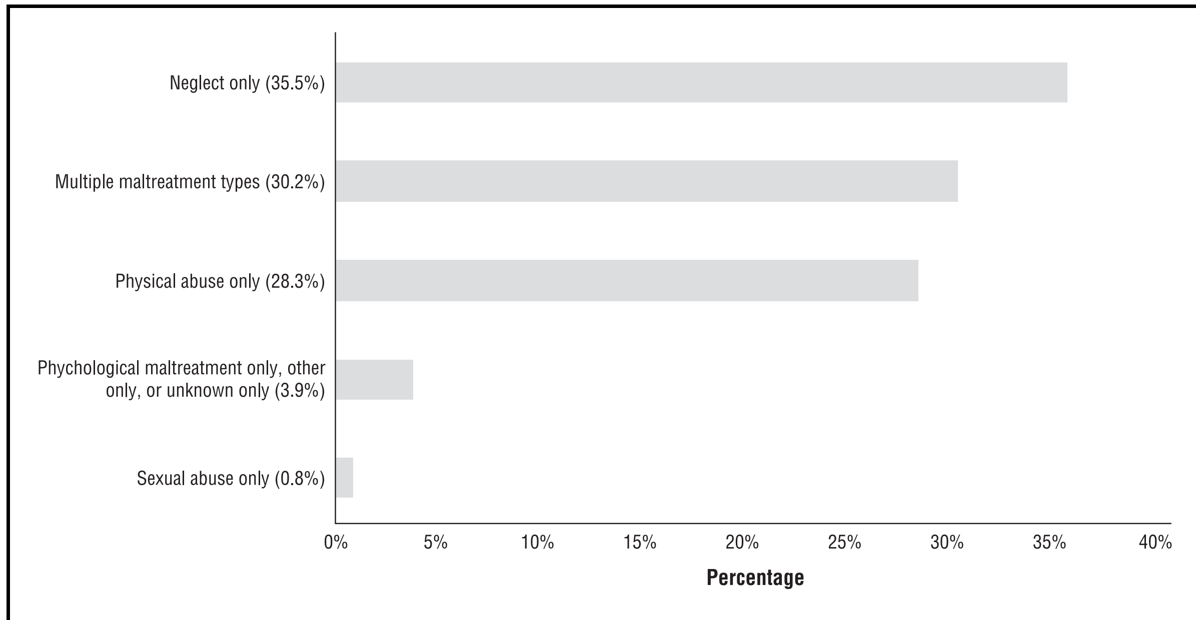
### EMOTIONAL ABUSE

Emotional abuse can include both active forms of insulting and terrorizing as well as acts of omission such as neglect. These descriptions capture two separate types of behavior: The first is the active behavior of insulting, ridiculing, terrorizing, or threatening a child through words; the second is the failing to provide attention to children through neglect, ignoring their physical needs (food, shelter, or medical attention), or failing to support them emotionally (not attending school events, ignoring a teacher's requests, or not spending time interacting with them). Other terms used to describe emotional abuse include *psychological maltreatment*, *psychological abuse*, *verbal abuse*, *verbal aggression*, *psychological damage*, or *mental injury*.

**Emotional Maltreatment** Emotional maltreatment is important because it is inherent in all types of child abuse and some researchers argue that it connects the cognitive, affective, and interpersonal problems related to sexual abuse, physical abuse, and neglect (Brassard, Hart, & Hardy, 1993). There is consensus that emotional abuse aggravates other forms of abuse; however, research on emotional abuse is not as plentiful as in other areas of child abuse.

It is a challenge to identify or categorize nonphysical injuries. Without visible physical injuries, it is very difficult to determine the line between insensitive or poor parenting and emotional abuse. For example, bragging about one's own children offends the Chinese-honored virtue of humility. Historically, the Chinese parenting strategy of shaming a child, even in public, has been considered a necessary part of discipline. Clinicians must balance sensitivity toward ethnic differences in parenting practices with assessment of potential harm to the children.

One example of terrorizing-like emotional abuse might be threatening a child with physical violence. Among adults, threatening bodily harm is the crime of assault. For children, the use of physical threats is widespread in North America. Verbal aggression is often considered a subtype of emotional abuse or psychological maltreatment. Whether this should be considered abusive is under debate. North American society tolerates parents using threats of violence or intimidation, as long as that




***Child Abuse and Neglect Fatalities by Maltreatment Type in 2004.*** CENGAGE LEARNING, GALE.

violence is couched in the form of physical discipline. One naturalistic study observing parents in public reported the use of threats to spank, hit, punch, hurt, pop, or beat children (Davis, 1996). Author Phillip Davis argued that the use of a culturally approved label such as *spanking* legitimized the behavior. This observational study also found that 50% of the adults who threatened a child went on to hit the child. Parents might lose the social acceptance of their verbal aggression or physical intimidation if they threatened to physically attack or injure children rather than relying on euphemisms such as *spank* (Straus, 2000).

**Neglect** Neglect is sometimes considered a passive form of maltreatment, in that it often consists of failing to parent appropriately. Extreme failures of neglect might include failing to provide the necessities of life (food, medical care, or clean housing). Emotional neglect may be as subtle as denying a child attention, reassurance, or acceptance. Both emotional and physical neglect have been identified as causes of delayed development or "failure-to-thrive" diagnoses among children (Iwaniec, 1997). Symptoms of failure to thrive include slow weight gain and height growth and psychosocial development that is significantly below norms and not caused by organic illness.

The definition of parental neglect may vary because it is often a parental failure to meet community standards, and standards vary from one community to the next. One example of neglect could be leaving a child at home alone. Whereas the community standards may be clear on whether leaving a 4-year-old child home alone is neglectful, there may be less agreement on whether leaving a 10-year-old child home alone constitutes neglect.

Prevalence rates of emotional abuse are estimated in several different ways. The U.S. Department of Health and Human Services (DHHS) compiles the child abuse cases reported to child protective services (CPS) in each state. In the 2005 report on child maltreatment by DHSS (2007), 7.1% of children were identified as having suffered emotional abuse. In comparison, 62.8% of victims experienced neglect. Another estimate of prevalence rates are the National Incidence Studies (NIS) mandated by the U.S. Congress. The NIS included both CPS investigations and estimates from professionals who may encounter child abuse. The NIS-3 results released in 1996 indicated that nearly 22% of the more than 1.5 million children who were abused in 1993 in the United States were physically neglected (Sedlak & Broadhurst, 1996). It was estimated that 13.7% of the children identified were emotionally neglected.

**Consequences** The impact of emotional abuse is varied and widespread. Identifying the exact consequences of emotional abuse can be difficult because negative consequences may appear slowly at different developmental stages as impaired emotional, cognitive, or social abilities. Psychological abuse has been linked to low self-esteem; hostility and higher aggression; anxiety, depression, interpersonal sensitivity, and dissociation; and shame and anger. Various

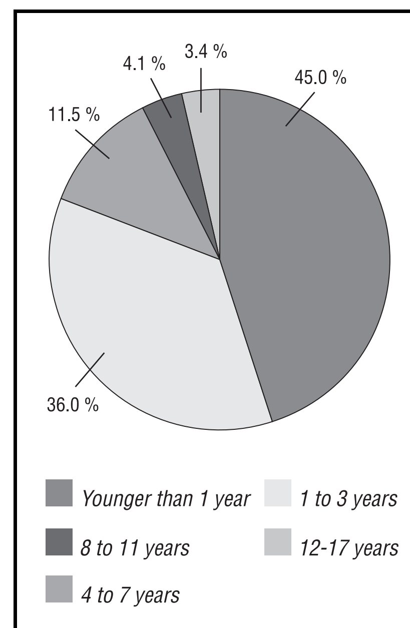
studies have attempted to isolate the negative correlation between emotional abuse and the impact of physical abuse. For example, Collete Hoglund and Karen Nicholas (1995) argued that emotional abuse, but not physical abuse, correlates with higher levels of shame. Emotional abuse inflicted by parents may relate to hostility in the victims specifically because victims develop a sense that other people do not value them or are unlikely to be kind (Nicholas & Bieber, 1994). In that research, no such relationship with hostility was found for physical abuse alone. In another study comparing the impact of different types of child abuse, emotional abuse was revealed to double the risk for feeling suicidal and psychopathy (Mullen, Martin, Anderson, Romans, & Herbison, 1996).

## PHYSICAL ABUSE

Physical abuse consists of any assault on a child by a caregiver. What constitutes an assault is controversial. Some researchers would argue that any form of physical discipline can be considered a physical assault (Straus, 2001). Physical abuse can include slapping, scalding, burning with a cigarette, hitting with an object, punching, or kicking a child. David Kolko (2002) pointed out that the definition of physical abuse is a social judgment as to what constitutes an excessive form of parent-to-child discipline. There is no clear line where physical discipline crosses from nonabusive to abusive behavior. That line will vary depending on state statutory definitions, the injuries sustained by the child, prior history of child welfare interactions, judgments made by the caseworkers, and other social characteristics.

The prevalence rates of physical abuse differ somewhat among estimates. The 2005 DHHS (2007) report on child maltreatment estimated that 16.6% of the CPS investigations involved cases of physical abuse. This percentage follows the pattern of decreasing reports of physical abuse. Between 1992 and 2003, a 36% decline in physical abuse cases was reported (Jones, Finkelhor, & Halter, 2006). The older NIS-3 estimated that nearly 25% of the children identified as harmed by abuse in 1993 were physically abused. Community samples report low rates of childhood physical abuse around or below 10% (Mullen et al., 1996).

One example of physical discipline that can escalate into physical abuse is spanking. Disciplining children by slapping or hitting them, although falling under some research definitions as a form of physical abuse, is a contentious and potentially problematic practice. One study found that only 55% of parents support the idea of spanking, although more than 94% have spanked their children at one time or another (Straus, 2001). Some countries in Europe have banned corporal punishment entirely, even in homes. Sociologist Murray Straus, developer of the




***Child Abuse and Neglect Fatalities Victims by Age, 2004.*** *This chart shows that majority of child abuse victims are under one year old.* CENGAGE LEARNING, GALE.

Conflict Tactics Scale, has criticized the fact that researchers hoping to discover ways to end physical abuse routinely ignore the risk factor of spanking. Even if the risk factor for corporal punishment is moderate, the prevalence of this risk factor (94%) means it can have a greater impact on public health than a high risk factor with low prevalence (Straus, 2000). The problem is that although corporal punishment is usually the precursor to physical abuse, most spankings do not lead to physical abuse.

**Consequences** Children who are physically abused can experience lasting damage that goes beyond the immediate injuries and pain inflicted. Even corporal punishment that does not exceed accepted cultural norms in North America (e.g., moderate use of spanking) now appears to have a negative psychological impact on children. The negative psychological effects can be social or interpersonal, behavioral, intellectual, or cognitive. For example, physical abuse appears to have a unique relationship with anger in victims—a relationship that does not appear for sexual or emotional abuse. A history of physical abuse has also been linked to increased mental health issues, eating disorders, depression, low self-esteem, and marital problems. Experiencing childhood physical abuse relates to increased rates of feeling suicidal, whereas battering experienced as an adult does not. Cynthia Perez and Cathy Widom (1994) reported that physical abuse was a predictor of lower IQ and lower academic performance.

Higher rates of physical illness, anxiety, anger, and depression were reported by adults almost 40 years after their physical abuse occurred (Springer, Sheridan, Kuo, & Carnes, 2007).

## SEXUAL ABUSE

Sexual abuse of a child includes any sexual activity to which a child cannot or does not consent. Nearly every U.S. state has legislation that defines sexual contact with a child under 14 years old as illegal and abusive. Additionally, sexual activity with children ages 14 to 18 may be considered illegal if the perpetrator is significantly older than the child, if the perpetrator is a caregiver or in a position of authority over the child, or if the activity is against the child's will.

Sexual abuse occurred in less than 10% of the CPS determinations in the 2005 child maltreatment report (DHHS, 2007). The NIS-3 estimated that 14% (more than 300,000) of the children identified as abused in 1993 were sexually abused (Sedlak & Broadhurst, 1996). In the 12 years following 1993, however, there was a significant drop in the number of sexual abuse cases reported in the annual child maltreatment reports (47%) and in self-report measures among youths (Jones et al., 2006).

Retrospective estimates of childhood sexual abuse present higher prevalence rates perhaps because they capture victimization that occurred over a number of years. Rates of childhood sexual victimization reported by college students remain consistently around 20 to 25% of women and 5 to 15% of men. Adult rates of disclosure among the general public are similar to college populations: 27% of women and 16% of men (Finkelhor, Hotaling, Lewis, & Smith, 1990). The rates are even higher in other populations—46% in a psychiatric clinic (Wurr & Partridge, 1996) and 66% in a clinic that treats sexually transmitted diseases (Senn, Carey, Vanable, Coury-Doniger, & Urban, 2007).

**Consequences** Similar to other types of abuse, sexual abuse has been linked with a variety of negative psychological, emotional, and interpersonal difficulties. The first area is trauma-specific consequences. A large number of sexually abused children meet the diagnostic criteria for posttraumatic stress disorder. Cognitive distortions are the second problem area. Victims of sexual abuse may develop feelings of self-blame, lowered self-esteem, or feelings of helplessness. Emotional distress is a third problem area for some victims. Anxiety, depression, and anger have all been found to correlate with sexual abuse, and these types of distress can continue at rates higher than seen in nonabuse victims into adulthood.

Another area of impact is seen in problematic externalizing behaviors such as aggression and high-risk sexual activity. Finally, the fifth area of concern is that there is evidence that sexual abuse can be associated with poorer educational achievement; however, it may be the limitations in the social and family contexts within which child maltreatment occurs that is the true interference.

## CO-OCCURRENCE

Much of the research on child abuse has focused on one type of abuse without assessing or holding constant the other types of abuse. Current research is focusing on the cumulative effects of experiencing multiple types of trauma. Physical abuse and emotional abuse are often associated or co-occurring. Experiencing both types of abuse appears to compound their potential negative impact. Emotional abuse appears to also co-occur with sexual abuse and neglect. Researchers are also beginning to look at the abuse occurring within the entire family unit, as child abuse and domestic abuse co-occur in a majority of instances (Edleson, 1999).

Children's reactions to abuse vary widely. The severity and length of negative symptoms experienced may depend on the severity and length of the abuse, characteristics of the abuser, family support, or mental health, disposition, age, or gender of the child. It is also important to recognize that not all victims of child abuse will experience all or even any of the negative consequences. Jean McGloin and Widom (2001) found that 22% of abused children showed no long-term symptoms but demonstrated strong psychosocial resilience.

## THE ABUSERS

Despite the popular fear that children are being preyed on by the stranger lurking in the bushes, it is parents or family members who commit the majority of abuse against children. According to the 2005 child maltreatment report, 79.4% of the abuse investigated through CPS was perpetrated by parents. Another 6.8% of the abuse was committed by other relatives (DHHS, 2007). Specifically, 76.5% of physical abuse was committed by parents and 7.3% by another relative. For neglect, 86.6% was perpetrated by a parent and 4.5% by another relative. For sexual abuse, 26.3% of the perpetrators were parents and 28.7% were another relative. In addition, another 9.2% were people in caregiver positions (legal guardian, day-care provider, or the romantic partner of the parent). The remaining perpetrators were either neighbors or friends (4.9%), other individuals (23.3%), or unknown (7.7%).

## CHILD ABUSE PREVENTION

Ideally, distinguishing abusive behavior from acceptable childrearing practices should be simple and consistent across the diverse groups in North America. In reality, however, definitions of appropriate parenting practices

are culturally bound. For example, the Vietnamese have a tradition that is still in use of hitting a disobedient child with a bamboo stick. Clinicians regularly have to make decisions based on behaviors that could be labeled either as a culturally specific parenting practice or a mild instance of abuse. Caseworkers must be culturally competent in order to assess true threats and communicate with at-risk families.

Child abuse remains a serious social problem in the United States. Despite the decline in rates of physical and sexual abuse reported in the annual child maltreatment reports, at least 1,460 children died in 2005 because of child abuse or neglect (DHHS, 2007). Child abuse prevention requires strengthening the parenting skills of families at risk. New resources for parents are still not reaching all of the families in need. Future child abuse research should examine intervention programs and practices of child protection investigators to ensure that at-risk populations are being served in the best manner possible. Further information and support can be found through the National Center for Missing and Exploited Children (www.missingkids.com) or the National Children's Advocacy Center (www.nationalcac.org).

**SEE ALSO** Volume 1: *Foster Care; Mental Health, Childhood and Adolescence; Parent-Child Relationships, Childhood and Adolescence; Poverty, Childhood and Adolescence; Resilience, Childhood and Adolescence;* Volume 2: *Domestic Violence.*

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# CHILD CARE AND EARLY EDUCATION

With more than 12 million children in the United States under the age of 6 in non-parental care every day, participation in early care and education settings has become relatively commonplace (Children's Defense Fund [CDF], 2005). In fact, most children have experienced some level of non-parental care by the time they enter kindergarten.

Because children's early care and education experiences can provide them with the foundational skills necessary for later school and life success, understanding what programs produce short- and long-term benefits is critical.

## DEFINING EARLY CARE AND EDUCATION

A variety of terms are used to describe children's early experiences in non-parental care. The term *early care and education* (ECE) encompasses all arrangements that provide care, supervision, and education to infants, toddlers, and preschoolers prior to formal school entry. These experiences can occur in a home or center setting as well as in a public school system and are often thought of as either informal or formal arrangements. Informal care includes home-based settings such as *family child care*, which is most frequently provided in a private residence other than the child's home, and *nanny* or *relative care*, which is typically provided in the child's home by someone other than a parent or in a relative's home. Formal care experiences include *center-based care* and *pre-kindergarten programs*. *Center based care* is typically provided in a non-residential facility for children ages 0 to 6 and can have different sponsors, including religious organizations, independent owners, universities or social service agencies. *Pre-kindergarten programs* are generally associated with a K–12 school system and include a year or two of learning in which children develop skills necessary for the kindergarten classroom (CDF, 2005; Magnuson & Waldfogel, 2005).

Informal arrangements are generally funded by parent fees and tend to be considered of lower quality than formal arrangements. In contrast, formal care arrangements can be either privately (e.g., most infant and toddler programs) or publicly (e.g., Early Head Start and Head Start programs or pre-kindergarten programs) funded and typically vary in the populations they serve. For example, publicly funded programs such as Head Start are intended to serve children from families with fewer economic resources and are not available to middle and upper income families. Most early care and education settings offer full or part day programs that can last from as little as 1 year to as many as 5 years.

## BASIC TRENDS IN EARLY CARE AND EDUCATION RESEARCH

Changes in the goals of early care and education, as well as shifts in the economic needs of families, have contributed to an overall increase in enrollment in these programs and thus to an urgent need to understand the impacts of these experiences on children's development. In the United States, early care and education began primarily as a support for employed parents and helped encourage economic self-sufficiency, especially among single and low-income women (Lamb & Ahnert, 2006). Early care and education also served to acculturate children, especially immigrants, and their parents, and to enrich children's lives in a variety of domains. Over time, the purposes of early care and education have shifted to focus on the academic and social preparation of children for entry into formal schooling. Indeed, kindergarten is no longer reserved for pre-academic foundational learning, but instead is used to teach skills once taught in first grade. As such, early care and education settings must now provide the foundational skills children need to succeed in kindergarten and beyond (National Association for the Education of Young Children [NAEYC], 1996). In a recent review of the early childhood education literature, Hyson and colleagues outlined two primary goals of early care and education: a) to develop cognitive skills necessary for academic success (e.g., representational thinking, self-regulation, and planning) and b) to develop emotional competencies (e.g., emotional security and emotional regulation) (Hyson, Copple, and Jones, 2006).

***Head Start.*** *Pre-school teacher Keiwana Jones, 23, adjusts the headphone for three-year-old Kacia Gay as she prepares to play an educational computer game at Fundamentals Academy, in Cuyahoga County, OH, as James Wallace, 3, waits patiently for his turn. Fundamentals Academy is one of many Head Start Centers in Cuyahoga County that is struggling to cope with the changes in eligibility rules.* AP IMAGES.

Research suggests that early care and education programs can provide promising avenues for preparing children for formal schooling and for deflecting negative academic and behavioral trajectories. These experiences also offer long-term economic benefits—both personal and societal (Barnett, 1998). The positive effects of ECE appear to be particularly strong for children from less-advantaged backgrounds (Votruba-Drzal, Coley, and Chase-Lansdale, 2004). Yet little is known about which specific features of these experiences support

children from different backgrounds and with different developmental needs. Despite the fact that there is ample evidence suggesting that high-quality ECE experiences promote positive outcomes, child care participation, especially extensive hours in care, has also been found to predict higher levels of aggression in young children (NICHD ECCRN, 2005). It is important to note that although children's aggressive behaviors were elevated, they were typically still within the normal range of problems.

Just as the purposes of early care and education have shifted, so, too, has the demand. According to the U.S. Department of Labor, participation in early care and education programs has increased by approximately 26% between 1998 and 2008, although these rates differ considerably by child and family demographics. For example, older children are more likely to be placed in formal care arrangements such as preschool or pre-kindergarten than are younger children. Similarly, families with the highest and lowest incomes are most likely to use center-based care and preschool settings (Magnuson and Waldfogel, 2005). These settings are more accessible to low-income families than middle-income families because of government subsidies and publicly funded programs such as Head Start. Even with the rising participation in ECE, these programs are not offered universally. In fact, the universality of early care and education settings differs considerably by state, with some states providing public preschool for all children (e.g., Oklahoma or Georgia) and others leaving the care and education of young children to individual families (e.g., Mississippi). Thus, as the National Research Council (2003) has suggested, researchers must continue to investigate systematically which programs and practices work, for whom, and under what conditions in order to generate effective early care and education policies and practices and to determine whether universal versus targeted programs are necessary.

## THEMES AND THEORIES IN EARLY CARE AND EDUCATION

A variety of topics drive research and practice in the field of early care and education. Of particular relevance to this entry are quality, developmentally appropriate practice, and short- and long-term impacts. Policymakers are just beginning to recognize the importance of quality early care and education in building the foundational skills necessary for later learning and life success. However, the definition of quality is quite heterogeneous, in part because quality is often described more in terms of desired outcomes than necessary inputs. Indeed, the majority of research on ECE describes outcomes in terms of "what happens to children" as a result of their educational experiences rather than what practices are necessary to produce positive outcomes (Bennett, 2000). Research trends in ECE, however, have led to increased efforts to understand *how* providers and teachers behave in the classroom and *what* is being taught. As such, a growing number of studies examine which quality indicators, including developmentally appropriate practices, are necessary to produce short- and long-term outcomes.

**Quality** In the United States, quality has typically been measured and monitored using instruments that assess process and structural characteristics of programs. Process quality includes caregiver sensitivity and responsiveness as well as cognitive stimulation and is typically measured via observations of activities and interactions in the childcare setting, including interactions with caregivers and peers and language stimulation. Some measures focus primarily on the experiences of individual children (e.g., Observational Rating of the Caregiving Environment [ORCE]) whereas other measures focus primarily on the experiences of the group (e.g., Infant/Toddler Environmental Rating Scale [ITERS], Early Childhood Environmental Rating Scale [ECERS]).

In general, process quality assessments offer an attempt to quantify the care and education children receive. Structural quality includes child-adult ratio, group size, and the formal education and training of teachers and is typically measured via observations or reports of structural features of the classroom. Structural quality is more easily quantified than process quality and as a result, these features tend to appeal more to policymakers because they may be formally regulated. Studies suggest that both process and structural quality across settings in the United States is fair to minimal (Cost, Quality and Outcomes Study Team, 1995; NICHD ECCRN, 2005). It is worth noting that high structural quality does not guarantee high process quality, although many believe structural quality is necessary for providers to offer sensitive caregiving and age-appropriate activities (Phillips, Howes, & Whitebook, 1992).

There are several other important indicators of quality to consider when examining ECE policy and practice, including federal and state level structural indicators, such as licensing and government subsidies for programs, as well as funding mechanisms. As with process and structural quality at the local level, federal and state structure also tends to be relatively poor. For example, despite the fact that licensed care providers typically offer more sensitive and responsive care than do unlicensed providers, only about half of U.S. states require that providers be licensed. With respect to funding, parent fees rather than government subsidies typically fund early care and education programs. As a result, not all children are guaranteed a preschool education. For example, in

the United States the average state expenditure on children enrolled in early childhood education programs in 2007 was approximately $3,642, compared with $11,286 in K-12 (National Institute for Early Education Research, 2007).

**Best Practice** Another topic of particular relevance to researchers and practitioners in the field of early care and education has to do with developmentally appropriate practice for young children. In 1987 the National Association for the Education of Young Children released a set of best practice guidelines that were based on five interrelated dimensions of early childhood practice:

1. creating a caring community of learners,
2. teaching to enhance development and learning,
3. constructing appropriate curriculum,
4. assessing children's development and learning,
5. establishing reciprocal relationships with families (NAEYC, 1996).

These guidelines are meant to support practitioners in their daily practice and are based on extensive knowledge about how children develop and learn. Importantly, they are intended to be both age appropriate and individually appropriate and contribute to a child's positive development in a variety of domains. Indicators of developmentally appropriate practice include the presence of active learning experiences and varied instructional strategies, as well as a balance between teacher-directed and child-directed activities (NAEYC, 1996). Programs that use an integrated curriculum as well as learning centers to engage children in a variety of topics are also considered developmentally appropriate. It is important to note that although these guidelines are generally accepted as a strong indicator of high-quality early care and education programs, not all practitioners agree that they reflect best practice for young children. Among the criticisms are that the guidelines are too prescriptive, that they discourage self-reflective practice among teachers, and that they are not culturally sensitive (Novick, 1996).

**Impacts** One of the most robust findings in the early care and education literature is that children who attend high-quality preschool programs are better at following directions, joining in activities, waiting and/or taking turns, problem solving, and relating to teachers and parents than children who do not attend preschool programs (for reviews, see Clarke-Stewart & Allhusen, 2005; Lamb & Ahnert, 2006; NICHD ECCRN, 2005). Further, children in settings with higher process-quality have more secure relationships with their mothers and caregivers and perform better on standardized tests of cognitive and language ability. Children also exhibit fewer behavior problems when they are in settings in which their teachers are more sensitive and responsive to their needs. Similarly, children in settings with high structural quality, indexed by low child-staff ratios, for example, are better able to initiate and participate in conversations, are typically more cooperative, and show less hostility during interactions with others (Clarke-Stewart & Allhusen, 2005; Howes, 1997; Lamb & Ahnert, 2006; NICHD ECCRN, 2005;). It is worth noting that a limited body of evidence suggests that the effect of early childhood care and education on kindergarten reading and math skills accrues to children who start their care between ages two and three; starting before two or after three results in fewer gains (Loeb, Bridges, Bassok, Fuller, & Rumberger, 2007).

Evidence of the long-term effects of early childhood education programs is mixed. Experimental studies such as the Perry Preschool Project and the North Carolina Abecedarian Project suggest that there are long-term benefits of high-quality early education programs, including higher levels of educational attainment, lower levels of juvenile crime and arrests, and lower rates of public assistance (Barnett, 1998). A limited number of non-experimental studies have identified modest effects of high-quality programs on children's development through second grade, including greater receptive language ability, math ability, cognitive and attention skills, and social skills, as well as fewer behavior problems (NICHD ECCRN, 2005; Cost, Quality, & Child Outcomes Study Team, 1995). Moreover, children who experience high-quality stable early care and education settings also have more secure attachments with adults and peers, engage in more complex play, and are less likely to be retained a grade or be assigned to special education (Clarke-Stewart & Allhusen, 2005; Lamb & Ahnert, 2006). Other studies have found no evidence of long-term benefits.

There is also a growing body of research examining the specific impacts of developmentally appropriate practice on children's social, behavioral, and academic outcomes. Results suggest that on average, children who attend preschool and kindergarten classrooms where developmentally appropriate practices occur exhibit greater academic success in the early grades than do other children. Children who attend developmentally appropriate classrooms also exhibit fewer stress-related outcomes and greater motivation levels than other children (Charlesworth, Hart, Burts, & DeWolf, 1993). Developmentally appropriate practices appear to be even more important for children at risk for academic failure. Among a sample of predominantly African-American and Hispanic children who participated in the Head Start/Public School Transition Project, children who

attended more developmentally appropriate classrooms exhibited significantly higher achievement than their peers who did not attend such classrooms (Huffman & Speer, 2000). There is also some evidence of long-term effects of developmentally appropriate practices (DAP) on children's outcomes. For example, children who attended developmentally appropriate classrooms had higher graduation rates and higher monthly incomes, as well as fewer arrests, through early adulthood (Barnett, 1998).

## STUDYING EARLY CARE AND EDUCATION: RESEARCH CHALLENGES AND FUTURE DIRECTIONS

Although the field of early care and education has made tremendous strides in identifying features of high-quality programs and best practices for children, additional systematic studies of which particular programs and practices work, for whom, and under what conditions are needed (NRC, 2003). Indeed, the vast majority of research in this field has been based on non-experimental or observational studies. Because parents' choices about early care and education programs are often constrained by their background characteristics, including socioeconomic status, isolating the effects of ECE programs on children's subsequent behavior and achievement from the effects of family factors is difficult. That is, a child may exhibit better skills in a given domain not because of her preschool experiences per se but because her family values a particular set of skills and has sought out, and provided, many other opportunities for the child to build these skills. Moreover, the variability in type, quality, and duration of early care and education settings makes it difficult to understand the full impact of these experiences on children's development. Nevertheless, non-experimental studies offer critical information about beneficial features of ECE settings.

In the coming years the field of early care and education would benefit from rigorous experimental studies in which one group of children is randomly assigned to classrooms or programs with a specific set of features, while another group of children who are eligible to attend these classrooms and programs are assigned to classrooms and programs that do not offer these features. By randomly assigning children to these different groups, the researcher is able to determine the impacts of the classroom or program features on children's outcomes because any initial differences between children who experience the program and children who do not are considered to be due solely to chance.

For both practical and ethical reasons, however, random assignment is not always possible. In this case, researchers should make every effort to take advantage of natural experiments (also referred to as quasi-experimental designs) in which a change in a policy or practice occurs. Because participants have no control over these policy or practice changes, they offer a non-biased estimate of program effects. Not only will experimental or quasi-experimental studies provide the estimates of causal impact that are necessary for creating policies and for changing practices in early care and education, but they will also be important for informing ongoing debates about universal versus targeted programs and interventions. Finally, methodological advances in the study of development also provide researchers with a valuable set of tools for understanding the effects of early care and education experiences on children's outcomes (for a review, see McCartney, Burchinal & Bub, 2006). Employing these methods whenever possible will continue to advance the study of early care and education.

**SEE ALSO** Volume 1: *Cognitive Ability; Maternal Employment; Racial Inequality in Education; School Readiness; Socioeconomic Inequality in Education; Stages of Schooling.*

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***Kristen L. Bub***

# CHILD CUSTODY AND SUPPORT

One out of every three children in the United States is born to an unmarried parent, and at least half of all American children will spend some time living apart from one of their parents by the age of 15 (Andersson, 2002). In 2004, 14 million parents had custody of 21.6 million children under the age of 21, and 83% of these custodial parents were mothers (Grall, 2006). Put another way, 27% of all children under the age of 21 resided with only one parent. These trends suggest that there may be a large portion of the population eligible for child support from a nonresidential parent at some time before they reach the age of majority, either as a result of parental divorce or separation, or being born to an unmarried parent. Understanding the implications of child custody for child well-being are important above and beyond the effect of divorce and being born to an unmarried parent on child well-being. The parent with whom the child lives provides daily interaction that is critical for child development and it is largely through this primary parent that the child has access to economic resources (Fox & Kelly, 1995).

## CHILD CUSTODY

The early American judicial system relied heavily on English common law where children were property and fathers had absolute power and legal obligations to protect, support, and educate their children. As a result, until the middle of the 19th century, the legal system was patriarchal and fathers were granted custody in divorce cases with judges having great control in custody decisions. By the late 19th century, states adopted the Tender Years Doctrine—a guiding principle that existed in most states until the late 20th century—which held that the best interest of the child, especially very young or female children, in divorce cases was maternal custody. At the same time, courts favored placing older children with the same-sex parent, which often meant separating siblings. Although there are few published court decisions on this matter, judges recognized that maternal care was paramount for infants but in one case a judge declared that a boy of 3 years was at a tender age, but the same is not true once that boy is 5 years. The women's rights movement of the 1920s further increased maternal preference in custody decisions as the legal status of women increased over this time. The assumption of maternal preference was also supported by Freudian psychoanalytic theory (which emphasized the mother's roles as the primary nurturer) and psychological theories on the development of infant attachment. As a result of these changes, maternal custody remained the norm for many decades.

Demographic changes in the middle of the 20th century, marked by dramatic increases in the divorce rate, once again challenged presumption of custody. Fathers' claims of discrimination, constitutional challenges of equal protection, and the entry of women into the workforce led most states to reject the model of maternal custody in favor of more gender-neutral policies. The Uniform Marriage and Divorce Act in 1970 provided for a best interest of the child standard of practice in custody cases, a practice adopted by most states. Judges determined custody based

on the individual needs and interests of the child rather than the gender or rights of the parents. Despite this, most custody determinations continued to be made in the mother's favor. Contemporary advocates have claimed that children should spend time with both parents, resulting in policies of shared physical custody, which has become the preferred option in many states.

Decisions concerning custody arrangements following a divorce can be very informal reached privately between parents, or alternatively decided more formally through the judicial system. National estimates of custody arrangements and requests are not available, however a study in California suggests that at least 50% of parents make private decisions between themselves about custody and visitation, and an additional 30% settle these issues after further negation (Maccoby & Mnookin, 1992). When parents are not able to reach negotiated agreements the formal legal process including judicial hearings, pretrial settlement conferences, and custody trials is used. These custody disputes are expensive and can require up to 3 years for settlement (Kelly, 1994).

Custodial outcomes reveal how parents and the legal system assess the well-being of children as well as the state of gender relations among parents (Seltzer, 1990). Examination of contemporary custody decisions has found that the likelihood of father custody is increased in cases where children are older, and particularly when the oldest child is a boy (Fox & Kelly, 1995). Greer Fox and Robert Kelly (1995) also find that the likelihood of father custody following divorce is decreased when mothers are highly educated or when fathers are unemployed. The influence of fathers' income on custody decisions is ambiguous. Fox and Kelly found that fathers with higher incomes are less likely to receive custody of children, whereas other studies found that the likelihood was higher (Christensen, Dahl, & Rettig, 1990). Maria Cancian and Daniel Meyer (1998) found that father custody is less likely when total income is high, but the mother has a higher share of the total income.

Empirical research has examined the effects of custody arrangements on child outcomes and finds that several important child outcomes may vary based on the gender of the single parent. Children residing in father-custody families have a significantly higher risk of drug use, more problems at school, take part in risky health behaviors more frequently, and exhibit more problematic behavior and are slightly disadvantaged in terms of cognitive skills. Adults who grew up in a single-father household obtain approximately one-half year less of education than their counterparts who grew up in single-mother households (Downey, Ainsworth-Darnell, & Dufur, 1998), and do worse even once socioeconomic status has been taken into account (Biblarz & Raferty, 1999). Children living in single-father families generally do just as well or better on indicators of mental and physical health than children residing with two biological parents, but exhibit worse access to health care compared to children residing in other family structures (Leininger & Ziol-Guest, 2008).

These types of studies are unable to assert causality due to the observational nature of the study design and, since relatively little is known about single-father families, it is difficult to identify the potential causal mechanisms driving the results. These findings could indicate selection effects, namely that fathers are less likely to maintain custody of children who are in poor health or that fathers are more likely to take custody of children who are exhibiting problem behaviors. Very little research exists that illustrates the direction of these selection effects. Previous literature on women who relinquish custody of their children suggests that they do so because of economic difficulties, emotional problems, fears about lengthy custody hearings, and abuse (Herrerias, 1995). However, changes in the labor market experiences of women and fathers' increasing interest in being the sole caretaker than before also influence the types of fathers who retain custody (Greif, 1995).

## CHILD SUPPORT

In 1950 the federal government implemented a policy designed for child support collections at a time when the prevalence of single-parent families (primarily mother-headed) was low. Congress required state welfare agencies to notify law enforcement agencies when welfare benefits were being distributed to families where the child had been abandoned by one of the parents. Law enforcement then would attempt to locate the nonresident parent and collect child support. Between 1950 and 1975, child support policies at the federal level were primarily focused on these children.

Since the late 1970s, Congress has enacted policy to strengthen the private child support system, particularly for low-income children. An important goal has been to shift the cost of raising children away from the government and onto parents (especially absent parents). While many of the changes have been targeted at increased financial responsibility by absent parents, there has also been much more focus, recently, on increasing the rights of the absent biological parent (usually the father). Prior to 1975, child support orders were the outcome of private negotiations between parents and the courts. The outcome of these negotiations varied, as did enforcement, with much of the enforcement done by mothers following a divorce, often requiring lawyers and court action. The private court nature of these negotiations also resulted in different outcomes for low-income and

higher-income parents who were able to afford good lawyers and avoid support orders altogether. By contrast, low-income fathers often could not afford lawyers and had unrealistic orders imposed. Further, orders were often based on the minimum amount of money required to raise a child, differentially affecting low-income fathers relative to higher ones.

The child support enforcement system was established when Congress enacted Title IV-D of the Social Security Act of 1975. The federal Office of Child Support Enforcement (OCSE) was established to oversee the federal-state child support program and lets states operate their own child support agency (the IV-D program) in accordance with the federal laws. The goal of this policy was to ensure that public support was not going to support children who could be supported by the nonresident parent. Since 1975 Congress has acted on several occasions to increase the purview of child support enforcement. For example, in 1980 and 1984 the law was changed to include all children regardless of household income and welfare status and provide services universally. In 1993, changes required states to develop in-hospital paternity programs, while the 1996 welfare reform instituted changes in child support payment penalties and paternity establishment.

Most children receive little or no child support from the noncustodial parent due to the lack of a formal child support order or because either no payments or only partial payments were made on an existing child support order. In 2004 40% of custodial parents did not have a child support agreement (36% of custody mothers and 60% of custodial fathers). Among families due child support, 45% received all that was due, 31% received some of what was due, and the balance received none of what was due. Research suggests that children whose families received child support received, on average, 16% of their total family income from child support (Grall, 2006). Child support is an especially important source of income for poor children who receive it, representing between 26–50% of total annual income (Grall, 2006). Further, empirical research also indicates that child support income may be more beneficial to children than income from other sources and that child support itself is associated with positive outcomes for children.

Custodial fathers are less likely to have child support orders, compared to custodial mothers. According to findings from the four-state Child Custody and Child Support Project (CCCSP), child support orders exist in about one-third of father custody cases, whereas orders are in place for more than 80% of the mothers who retain physical custody (Christensen, Dahl, & Rettig, 1990). Further, Susan Stewart (1999) found that 36% of noncustodial mothers contributed child support when their children resided with other relatives, whereas only 27% of noncustodial mothers contributed child support when their children lived with the father.

Few studies examine the characteristics of fathers who secure child support orders following divorce. J. Thomas Oldham (1994) suggests that fathers are less likely to receive orders compared to mothers because of judge opinions on the following: They may be hesitant to require women to pay support, custodial fathers have higher incomes than non-custodial mothers so they may suggest that fathers are less in need of child support, or mothers may give up custody of their children in exchange for no payment of support required. Findings suggest that fathers with low incomes and earnings, especially lower than their wives, were more likely to have child support orders (Greif & DeMaris, 1991).

Child support enforcement and child support receipt may influence the behavior of both the custodial and noncustodial parent, and also may affect various child educational, developmental, and cognitive outcomes. A small but growing empirical literature focuses on the noneconomic impacts of child support receipt on children. Child support has been estimated to play an important role in children's cognitive test scores, perceived scholastic competence, and reading and math scores on standardized tests above and beyond its influence on total income, effects that endure even after controlling for unobserved characteristics of fathers and families. Studies also find that these associations extend to educational attainment—specifically that higher child support, independent of the effect on total income, is associated with greater school completion and that income from child support may be more important than income from other sources. Researchers also have investigated whether child support receipt is associated with behavioral and developmental outcomes. The evidence is mixed, suggesting weak associations between receipt and reduction of behavior problems, but no significant relationship between receipt and cognitive stimulation in the home or behavioral development.

## FUTURE DIRECTIONS FOR CHILD CUSTODY AND CHILD SUPPORT RESEARCH

Child custody and child support populations, practices, and policies are ever-changing and the next wave of child custody and support research needs to contend with and address such issues. Specifically, an increase in the number of father-custody households highlights the importance of examining this family structure as it may differ from mother-custody households. Further, important population changes require focusing on child support within the context of multiple-partner fertility and

incarcerated noncustodial parents. Additionally, joint and shared custody practices have shifted the dynamic both to how custody is examined and how child support payments are relevant in these cases. Finally, evaluating policy changes as a result of welfare reform reauthorization is going to be important.

Future research needs to concentrate on the changing dynamics of family structure and custody and how it relates to child well-being. By 2006 single-father families represented 14% of all single-parent families with children. While this represents only 5% of all families with children, single-father families are one of the fastest growing family types, increasing at a rate faster than single-mother families (Meyer & Garasky, 1993). Some research explores differences in child well-being associated with residing in a single-father family; however, more research needs to be conducted pertaining to the health of children, as much of the existing research regarding the effects of family structure on child outcomes often compares the experiences of children living with single mothers to those living with married parents.

Perhaps one of the most important changes in contemporary family structure is the prevalence of multiple-partner fertility, that is, families in which at least one partner has a child by someone else. Figures from Wisconsin suggest that more than half of mothers on welfare had children with more than one partner. Among the entire child support enforcement caseload, for 9% of mothers, both the mother and at least one father had children with more than one partner; 16% of the mothers had children with only one father but, also, the father had children with more than one mother; and 6% of mothers had children with more than one father who only had children with her (Cancian, Cook, & Meyer, 2003). Future research should focus on how these families manage child support obligations.

Incarcerated noncustodial parents are an important topic of study because incarceration poses a real barrier to child support payment and employment, and because it is an important child support enforcement tool. In one study, 29% of noncustodial fathers were institutionalized primarily in prisons (Sorensen & Zibman, 2001), estimates similar to those from the Fragile Families study where 27% of fathers were known to have been incarcerated (Western, 2006). Additionally, 55% of male inmates in state facilities and 63% of male inmates in federal facilities are parents of children under the age of 18 (Mumola, 2000), and between 22–26% of state inmates are part of the child support caseload (Griswold & Pearson, 2003). Incarceration is an important contributor to growing child support arrears as well. Future research needs to investigate whether policies and practices related to child support orders for incarcerated noncustodial parents should change, and what the outcomes are as a result of the modification of orders due to this changing circumstance.

As noted above, joint and shared custody arrangements have become much more common in contemporary society. Previous research suggests a positive association between joint legal custody and child support and interactions (Seltzer, 1998). However, child support guidelines in these cases are less clear, and different states have developed different approaches to how child support is calculated. Future research should examine what the differential approaches used by states has on child support compliance and child well-being, as well as whether guidelines influence parental behavior.

Prior to welfare reform in 1996, federal law mandated that states *pass through* the first $50 of collected child support each month to families receiving cash assistance. Welfare reform changed the pass-through policy by granting states the option to determine their own pass-through policies; all but 16 states eliminated the pass-through policy. Welfare reform reauthorization in 2006 changed the pass-through policies once again, making federal participation more generous. States can pass through $100 per month for one child or $200 per month to a family with two or more children receiving cash welfare and the federal government will resume the cost share of the pass-through. Previous studies indicate that more generous pass-through policies are associated with higher probability of paternity establishment and child support receipt. Given these latest policy changes, research should determine how these policies affect transfers to children and families. Preliminary work suggests that if all states adopted this pass-through policy, the average amount of child support received while on cash welfare would more than double (Wheaton & Sorensen, 2007).

## CONCLUSIONS

Given the changing nature of family structure in the United States, the number of children affected by custody decisions and eligible for child support has grown significantly. Public policy has historically responded to these changes by increasing involvement in what previously has been considered the private domain. Moving forward, as more children interact with the judicial and policy system, researchers will need to continue to understand the relationships between these systems and child well-being.

**SEE ALSO** Volume 1: *Child Abuse; Family and Household Structure, Childhood and Adolescence; Parent-Child Relationships, Childhood and Adolescence; Policy, Child Well-Being; Poverty, Childhood and Adolescence;* Volume 2: *Fatherhood; Motherhood; Noncustodial Parents.*

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***Kathleen M. Ziol-Guest***

# CHRONIC ILLNESS, CHILDHOOD

SEE Volume 1: *Illness and Disease, Childhood and Adolescence.*

# CIVIC ENGAGEMENT, CHILDHOOD AND ADOLESCENCE

The topic of civic engagement on the part of U.S. citizens is routinely investigated in and outside of the social sciences. Questions pertaining to political participation and civil society target all age groups, but in recent years, scholars have become interested in the question of civic engagement among youth. Normally, the definition of youth centers on those who are eligible to vote, between the ages of 18 and 24, or sometimes referred to as *generation next*; however, researchers have also begun to focus their lens on childhood and adolescence, primarily because of the impact previous civil rights struggles have had on this group. Overall, it is believed that this generation is more liberal on a number of topics in relationship to their older counterparts, especially with regard to gay marriage and women's rights. Social scientists have focused on civic engagement among children and adolescents in relationship to three areas: voluntary organizations, youth leadership and development, and youth activism. Focusing on youth, particularly adolescents, allows scholars to expand the definition of activism to include a range of political and social activities.

### VOLUNTEER AND AFTER-SCHOOL ACTIVITIES

Because civic engagement and political participation is often linked to young adults over 18, studies of civic participation among adolescents often focuses on volunteer activities. Teenagers are often encouraged to participate in after-school and volunteer activities, for instance, as a way to encourage and mold future political participation. Volunteer organizations vary in their definition and can begin in childhood and often include organizations such as the Girls Scouts, Boy Scouts, and Little League sports. Some of these organizations originate and are affiliated with the schools that youths attend, or are already included as part of the school infrastructure. Religious institutions, such as synagogues and churches, also offer youth a way to become involved in civic activities. Research questions typically focus on the relationship between the particular activity, age of the youth, and future civic engagement. Through these organizations, youth establish social networks, peer relationships, and may even deepen relationships with their parents, who may be involved in similar civic activities.

The importance of after-school activities in regard to youth involvement in voluntary associations and civic engagement is made especially clear in Daniel McFarland's and Reuben Thomas's (2006) study. Using quantitative data to study school-related activities, parental engagement, and other social networks, McFarland and Thomas found that those organizations where youths were encouraged and trained in the areas of public speaking, vocal, dance, and instrument training enhance and encourage future civic engagement and political participation. Therefore, as the authors suggest, cuts in performing arts programs such as drama and music will have deleterious effects on the breadth and depth of American political and civic involvement. As this and other recent studies suggest, voluntary and after-school activities have a significant impact on the leadership potential of youth. Sociologist Amy Best (2000) even found that innocuous events, such as the senior prom, are important sites for communicating civic responsibilities, democracy, and political ideology among youths.

Similar in importance to childhood voluntary activities, parental civic engagement is a significant influence on childhood and adolescent involvement in political activities. Overall, there is a concern that the decline in social capital among youths and adults alike will contribute to the lack of political participation on the part of those in their youth; therefore, the political participation of parents, peers, and the neighborhood a youth grows

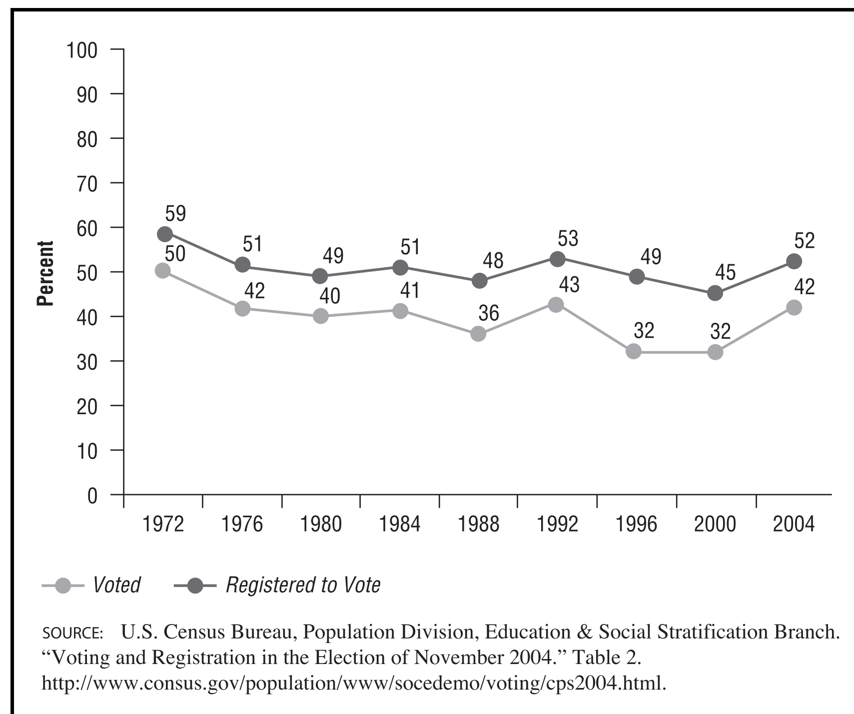


***Figure 1.*** *Percentage of young adults (ages 18–24) who reported registering to vote and voting in Presidential elections, 1972–2004.* CENGAGE LEARNING, GALE.

up in also affects their own participation. While volunteer and extracurricular organizations may remedy this problem somewhat, the social capital in one's own neighborhood and social circle may have a larger impact on future civic involvement. For instance, in their research on young citizens' knowledge of political issues, Scott Wells and Elizabeth Dudash (2007) found that youths gleaned most of their political information from the Internet, their family, and their friends. They use this knowledge to determine their individual political strategies and future voting patterns. Additionally, and perhaps more importantly, their family's voting patterns and political beliefs were held in higher regard than media sources. Overall, most research on the political knowledge of youths (adolescents in particular) is related to their parent's political involvement, knowledge, and willingness to share with their children.

## YOUTH LEADERSHIP AND DEVELOPMENT

Among teenagers, scholars have also begun to study more traditional forms of youth and leadership development as a way to understand youth civic engagement. Moving away from volunteer and after-school activities, youth leadership organizations set out to train the youth to assume leadership roles in their communities, often on par with adults. These organizations vary from being youth-led organizations to organizations led by adult allies who train the youth as organizers. The overall assumption in these organizations is that youths are as deeply and equally invested in the well-being of their communities as adults, who are often positioned as leaders. The topics of the organizations vary, ranging from educational change, art, speech and debate, and spoken word poetry. In each case, the overall goal is to engage and support the youth as leaders in their community, able to make decisions for the good of all. There are several goals in these organizations: (a) to have youths and adults work together as allies; (b) to provide youths with leadership capabilities that will be sustained over time; and (c) to create opportunities for the youth to understand and incorporate their own experience into their organization's strategies.

Teenagers as a group are overwhelmingly disenfranchised, and are not allowed to participate in traditional forms of civic engagement, such as voting. Therefore, their relationships with adults are imperative in achieving their civic goals. Over time, working with adults allows the youth to learn how to take on leadership roles in peer situations with people who are older than them and outside of their family. For instance in Wendy Wheeler's and Carolyn Edlebeck's (2006) work on youth civic engagement, it was concluded that youth-adult relationships should be intentional, elucidating the ways that youth and adults work together, envision change with one another, and produce strategies to that effect. A central aspect of this relationship is self-reflective activities in which youths build self-esteem; build alliances across race, class, and gender lines; and begin to connect what sociologist C. Wright Mills (1916–1962) described as personal troubles to public issues.

## YOUTH ACTIVISM

Similar to the research on youth leadership and development, scholars have begun to focus on youth activism as part of their analysis of youth civic engagement. Questions surrounding what inspires youths to participate in social change and politics dominate these discussions. Recognizing that contemporary forms of activism may not fit into previous models of social change, sociologists have begun to ask questions about how youth activism in the early 21st century might compare to activism of the 1960s, 1970s, and 1980s. For instance, sociologist Todd Gitlin's (2003) book, *Letters to a Young Activist*, tackles this issue directly. In particular, Gitlin questions how the youth can organize in what many refer to as the post–civil rights era when the discussions of 1960s activism mark cultural and political understandings of social change. Perhaps because of this, social scientists have turned their eye toward popular culture as a potential mechanism for civic engagement.

Many scholars have focused on popular culture as an important mechanism for engaging youth in political consciousness and political debate. For instance, popular cultures such as hip-hop have received considerable attention because of their ability to draw youth to social change events. Similarly, the relationship between hip-hop culture, politics, and post–civil rights youth is the focus of both academic and popular discourses. Many approaches focus, importantly, on the relationship between the hip-hop generation and mainstream democratic processes. During the 2004 and 2000 presidential elections, Russell Simmons (b. 1957), cofounder of Def Jam records, was central in organizing the *hip-hop vote*. For youth of color, in particular, popular culture is an important site for political mobilization.

SEE ALSO Volume 1*: Activity Participation, Childhood and Adolescence; Political Socialization; Religion and Spirituality, Childhood and Adolescence; Sports and Athletics.*

***Campaign Volunteers.*** *Barack Obama smiles for a group photo with young volunteers.* AP IMAGES.

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***Andreana Clay***

## CLAUSEN, JOHN
***1914–1996***

John Adam Clausen, an American sociologist who was born on December 20, in New York City, is considered the father of the sociology of mental health. He was a primary figure in the sociology of the life course whose academic and organizational contributions include the conceptualization of planful competence, pioneering work in the social psychological study of mental illness, leadership of the Socioenvironmental Laboratory at the National Institute of Mental Health at its inception, and overseeing one of the most important data archives in life course studies. Clausen died on February 15 in California.

Clausen's most influential life course concept was planful competence, an umbrella term that links three dimensions developed early in life that influence adult outcomes: intellectual investment, dependability, and self-confidence. Planful competence involves awareness of one's intellectual abilities, social skills, and emotional responses to others. It includes the ability to recognize and develop one's interests and options and to think about ways to maximize those options. The theory suggests that individual rationality and possibilities for choice have replaced traditional determinants of life outcomes. Adolescents with greater planful competence evidence higher self-knowledge and self-confidence and realistic goal setting. They are more likely to achieve later-life goals because these capacities inhibit unwise choices. In *American Lives* (1993) Clausen used life

***John Clausen.*** **PHOTO COURTESY OF UNIVERSITY OF CALIFORNIA, BERKELEY, DEPARTMENT OF SOCIOLOGY.**

histories and quantitative analysis to show that planfully competent adolescents had more stable careers and marriages and found more fulfillment in later life.

Clausen's early life trajectory illustrates the concept of planful competence. Born in New York City, Clausen recognized his strengths in mathematics and science at an early age. He began undergraduate studies in engineering at Cornell but after two years switched to economics, a field more closely aligned with his broadening interests. After graduation Clausen's ability to follow his own interests and recognize the impact of those around him, even in the face of adversity, cost him a job. He was fired from a bank position for wearing a button supporting the 1936 presidential candidate Franklin D. Roosevelt in defiance of the organization's requirement to wear buttons supporting Alf Landon, the Republican candidate.

Clausen returned to Cornell, earning a master's degree in sociology in one year while working full-time as a caseworker for the welfare department. What Clausen learned in that work experience helped develop his focus on the social psychological aspects of sociology. In 1938 he entered the University of Chicago, where his training was shaped by Samuel A. Stouffer, Harold Blumer, and Ernest Burgess. During those years Clausen spent time as a research assistant at the Institute for Juvenile Research, studying ex-convicts and delinquents, and developed "an interest in what you can learn by looking very intensely at an individual life history" (Clausen, 1991). During that time he married Suzanne Ravage, with whom he had four sons during their 54 years together.

Clausen worked at the Virginia State Planning Board until World War II, when he joined the War Department, where he contributed to the *American Soldier* series. After the war he briefly took a position as an assistant professor of sociology at Cornell. In 1948 he was appointed to the newly established National Institute of Mental Health (NIMH) and within three years became chief of the Laboratory for Socio-Environmental Studies. In that capacity he brought together talented young scholars, including Erving Goffman, Morris Rosenberg, Leonard Pearlin, William Caudill, Marion Radke-Yarrow, Carmi Schooler, and Melvin Kohn. The laboratory played a major role in establishing the importance of social science at NIMH.

In 1960 Clausen was named director of the Institute for Human Development (IHD) at the University of California at Berkeley and became a professor in the Department of Sociology, where he remained for the rest of his career. The IHD center conducted three well-known longitudinal studies that followed individuals from their early years in the 1920s and 1930s into late life: the Oakland Growth Study, the Guidance Study, and the Berkeley Growth Study. Clausen recruited Glen Elder to work on the Oakland Study, resulting in the pioneering study *Children of the Great Depression* (1974). During his years as director Clausen oversaw the merging of the three studies, leading to Jack Block and Norma Haan's *Lives through Time* (1971) and the anthology *Present and Past in Middle Life* (Eichorn, Clausen, Haan, & Honzik, 1981).

Clausen contributed numerous chapters and papers to the field of life course research and wrote influential books such as *The Life Course: A Sociological Perspective* (1986) and *American Lives* (1993). This body of work reflected his lifelong concern with individual development, linking childhood and adulthood, including the ways people exert agency over their lives. Clausen was praised for his logic and rigor in both theory and methods and won many scholarly honors.

**SEE ALSO** Volume 1*: Data Sources, Childhood and Adolescence; Elder, Glen H., Jr.;* Volume 2*: Agency.*

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# COGNITIVE ABILITY

A precise definition of the term *human cognitive ability* is elusive even though it is a subject widely studied by psychologists, sociologists, behavioral geneticists, and other scientists. In the most general sense, cognitive ability can be defined as the capacity to perform a set of cognitive tasks, or "task[s] in which appropriate or correct mental processing of information is necessary for successful performance" (Carroll, 1993, p. 10). In practice, however, concepts and measurements of cognitive ability are more narrowly defined to capture individual capacity to perform specific tasks that predict educational and labor market success, such as verbal and mathematical skills.

The literature also makes a distinction between *cognitive ability* and *cognitive achievement* (e.g., educational attainment). Ability is more likely to be genetically determined whereas achievement is more acquired through individual effort, schools, and peers, for example. Also, in contrast to achievement, which is more heavily influenced by motivations and opportunities in later life, ability is most malleable in childhood and tends to stabilize in adolescence (Carroll, 1993).

Attempts to measure ability are limited by both conceptual and practical problems. Some argue that assessments of children under age 6 cannot be accurately obtained. Others argue that ability tests are more likely to capture test-taking skills than true underlying cognitive traits. However, several cognitive assessments exist that are reliable (i.e., produce the same results when individuals are retested or tested in alternative ways) and can be efficiently administered to large representative samples (Rock & Stenner, 2005). Two of the most commonly used are the Peabody Picture Vocabulary Test–Revised and the Woodcock-Johnson Psycho-Educational Battery–Revised tests. The former tests vocabulary size among children ages 3 to 5 whereas the latter can assess individuals age 3 to 95 and is a more comprehensive test of four broad abilities: reading, mathematics, written language, and general knowledge. Other noteworthy tests include the Early Childhood Longitudinal Study–Kindergarten Battery, the Wechsler Preschool and Primary Scale of Intelligence–Revised, and the Stanford-Binet Intelligence Scale.

## MAIN CHARACTERISTICS OF COGNITIVE DEVELOPMENT

Two main conclusions can be drawn from research on cognitive ability. First, there is consensus that neither nature nor nurture fully explains the development of human cognition; rather, interactions between the two produce cognitive outcomes (Plomin, 1994). These studies compare the cognitive outcomes of siblings who were raised together and siblings who were raised apart, or compare monozygotic twins (100% similarity in genetic makeup) and dizygotic twins (50% similarity in genetic makeup). The findings demonstrate that whereas cognitive functioning is a heritable trait, environment goes a long way in shaping cognitive development. For example, meta-analyses of adoption and twin studies involving more than 10,000 twin pairs found that at least half of the variation in cognitive ability across individuals could be attributed to environmental influences (Chipeur, Rovine, & Plomin, 1990).

Second, early childhood is the most critical stage in cognitive development. From a biological perspective, this period is most crucial because brain development occurs most rapidly during early childhood (Shore, 1997). Additionally, social science research shows that most of the genetic and environment effects are realized by the time children reach adolescence (Guo, 1998; Keane & Wolpin, 1997).

## PREDICTORS OF COGNITIVE OUTCOMES

The environmental predictors of cognitive ability include both prenatal and postnatal factors. Maternal behavior can influence cognitive outcomes even before birth. For example, alcohol and drug-use during pregnancy can impair healthy fetal development.

**Family Income and Poverty** Perhaps the most widely studied and best understood environmental factors are family income and poverty. First, the effect of family income is most prominent when economic hardship is experienced in early childhood relative to any other period of development (Duncan & Brooks-Gunn, 1997). Guo (1998) found that the effect of cumulative poverty over childhood (from birth to age 8) is more detrimental for childhood ability than the effect of cumulated poverty from birth to adolescence on adolescent ability. Duration of poverty also matters. Studies that have contrasted multiyear to single-year measures of income and demonstrate that single-year measures understate the influence of poverty because much of child

poverty is persistent rather than transitory (Duncan, Brooks-Gunn, & Klebanov, 1994; Korenman, Miller, & Sjaastad, 1995). Possible mechanisms through which income may influence cognitive function include (but are not limited to) childrearing practices and quality of the home learning environment, parental employment and childcare provisions, family structure and change, and neighborhoods. Each of these factors can also have an independent effect on cognitive outcomes.

**Parenting Behaviors and Home Learning Environments** Studies based on naturalistic and laboratory settings document important socioeconomic variation in childrearing practices that may influence child cognitive development. For example, socioeconomically advantaged parents are more likely to talk to their children, use complex vocabulary, engage in educationally oriented activities, and encourage child-initiated conversation (Hoff, 2003; Lareau, 2003). Additionally, parents facing economic stress tend to be more volatile and are more likely to use harsh physical punishment (Bradley, Corwyn, McAdoo, & Coll, 2001; Elder, 1999). What is less clear is to what extent these differences go on to affect children's cognitive development.

Studies show that the characteristics of children's home environment relate to child cognitive outcomes and also mediate the relationship between income and cognitive outcomes. Quality of home environment is often measured using the Home Observation and Measurement of the Environment (HOME) scale, which is a composite measure of the material resources at home (e.g., toys and books), childrearing practices (e.g., discipline, maternal warmth), and physical organization of the home (e.g., disorganized and cluttered). Home measures account for up to half of the statistical relationship between poverty and cognitive outcomes (Korenman et al., 1995; Smith, Brooks-Gunn, & Klebanov, 1997). However, because Home scores aggregate such a wide assortment of characteristics, it is difficult to identify the specific aspect of home environment (i.e., material vs. childrearing practices) that matter.

**Parental Employment and Childcare** Maternal employment dramatically increased in the late 20th and early 21st century, and parents looked outside of the family for alternative childcare options. As a result, the type and quality of nonparental childcare plays an increasingly important role in influencing children's early learning environment.

Both randomized trials (see Currie, 2001, and Karoly et al., 1998, for a detailed review) and examinations of large-scale programs such as Head Start (Currie & Thomas, 1995) show that developmentally appropriate preschool programs have the potential to enhance verbal development and math reasoning, especially among disadvantaged children who may not be receiving appropriate cognitive stimulation at home. Low quality, informal childcare (e.g., care by untrained relatives), on the other hand, may have negative effects. However, high quality preschools alone are not enough. Gains in cognitive outcomes are lost if children are subsequently placed into low quality schools (Garces, Thomas, & Current, 2002).

Studies have found that high quality childcare may partially mediate the potentially negative effects of early maternal employment (Han, 2005; National Institute of Child Health and Human Development Early Child Care Research Network, 1997, 1998). Access to high quality childcare, however, is varied in the United States.

**Family Structure and Change** Numerous studies show that family structure (e.g., single parenthood and nonmarital birth) and changes (i.e., divorce, separation, cohabitation, and remarriage) have the potential to cause instability in children's lives (Amato, 2000; Demo & Acock, 1988). However, it may not be family structure or change, per se, that causes lower cognitive outcomes; rather, preexisting conditions that jointly determine family formation and cognitive outcomes (e.g., poverty, mother's age and education) may partially explain why children born into nonmarital unions have worse reading scores than children of mothers who are continuously married (Cooksey, 1997). Additionally, many studies find that the association between family structure and change disappears once maternal characteristics such as mothers' education, IQ, age at first birth, and smoking behavior during pregnancy are accounted for (Carlson & Corcoran, 2001; Fomby & Cherlin, 2007).

## OTHER SOCIODEMOGRAPHIC DISPARITIES: RACE/ETHNICITY AND SEX

White–Black and White–Hispanic gaps in cognitive outcomes are well documented; limited data has often precluded the study of other ethnic groups such as Asian Americans. Studies show that White advantage in test scores begins before children enter school and lasts into adulthood (e.g., the White–Black gap in verbal tests among preschool children ranges from one fourth of a standard deviation to more than one standard deviation; Rock & Stenner, 2005).

Theories arguing a genetic basis for these gaps persist, in spite of the fact that no genetic evidence has substantiated these claims. The weight of the evidence shows that a complex and interrelated set of environmental factors produces these gaps. This argument is

based on the following findings: (a) gaps in test scores have declined during the 20th century; (b) test scores of Black or mixed-raced children who were raised by adoptive White parents are substantially higher than their nonadoptive counterparts; and (c) environmental changes can have a substantial impact on test scores (Jencks & Phillips, 1998).

Racial differences in family backgrounds can be stark. For example, one study estimated that 10% of White children, 37% of Hispanic children, and 42% of Black children live in poverty and account for 50 to 80% of the gap in verbal and math scores (Duncan & Magnuson, 2006). However, because family background is related to so many characteristics that also affect cognitive development (e.g., parenting practice, maternal health, neighborhood experience), teasing out the specific family effects is problematic.

Relative to the White–Black test gap, sex differences are small, ranging from one fifth to one third of a standard deviation. Gender gaps in test scores only begin to emerge in high school with math scores slightly favoring boys and larger gaps in verbal scores favoring girls (Hedges & Nowell, 1995). Environmental explanations, rather than genetic ones, are most compelling given that these gaps only emerge later in adolescence and have been declining over the past several decades (Friedman, 1998).

The most prominent explanations point to gendered socialization, which differentially promotes verbal and mathematical competency among boys and girls. For example, some scholars argue that schools discourage female success in the math and sciences (see American Association of University Women, 1995). Additionally, sex differences in out-of-school experiences may also matter (Downey & Yuan, 2005; Entwisle, Alexander, & Olson, 1994). For example, boys are more likely to perform activities that enhance quantitative skills (e.g., using computers, participation in math/science clubs) whereas girls are more involved in activities that tend to promote verbal/reading skills (e.g., reading, art classes).

**Long-Term Effects** The literature suggests two important longer-term trends: (a) Child cognitive development has lasting effects on adult outcomes and (b) both racial and sex gaps widen over the life course. First, cognitive development in early childhood is predictive of a variety of adult outcomes ranging from educational achievement, criminality, health outcomes, and labor market performance (Rouse, Brooks-Gunn, & McLanahan, 2005). Additionally, comparing the effects of education and cognitive ability on occupational standing, John Warren, Jennifer Sheridan, and Robert Hauser (2002) showed that whereas the effect of education declines over time, ability has a positive and persistent effect over the life course. Second, both racial and sex gaps in test scores widen when children enter schools, suggesting that school quality may contribute to producing disparities. These findings, coupled with studies emphasizing the importance of early childhood environment, have led prominent scholars to argue that early childhood is fundamental in setting individuals on trajectories that become increasingly difficult to alter as individuals reach adulthood (Heckman, 2006).

## FUTURE DIRECTIONS

Although the literature shows that cognitive ability is influenced by both genetic and environmental factors, it also suggests several important avenues for future research. First, future research should better identify the relative importance of genetic versus environmental factors and provide a better understanding of how this relationship may change over the life course. For example, attempts to quantify genetic determination of cognitive ability provide mixed results, and estimates vary dramatically by age. For example, from infancy to childhood, 20% to 40% of cognitive outcomes can be attributed to genetic factors (Kovas, Harlaar, Petrill, & Plomin, 2005; Plomin, 1994). In late adulthood, nearly 60% can be accounted for by shared genetic traits.

Second, methodological challenges remain in identifying the causal effect of environmental characteristics, such as family background. For example, family income is highly correlated with other characteristics of the family that can also affect ability, so it is difficult to identify causality. Although sibling and longitudinal data can help tease out unobserved family and individual factors that bias estimates, perhaps the best solution lies in the implementation of large-scale experiments.

Third, there is considerable racial variation in how environment affects cognitive outcomes. For example, studies have shown that neighborhood characteristics, maternal employment, and preschool quality have a greater effect on the cognitive development of White versus Black children. Are these differences due to racial differentials in family organization, access to goods and services, or demographic composition (e.g., income, education)? Future research can provide insight into the culturally specific pathways through which cognitive outcomes can be affected.

**SEE ALSO** Volume 1: *Academic Achievement; Child Care and Early Education; Family Process Model; Genetic Influences, Early Life; Learning Disability; Socialization, Gender.*

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***Amy Hsin***

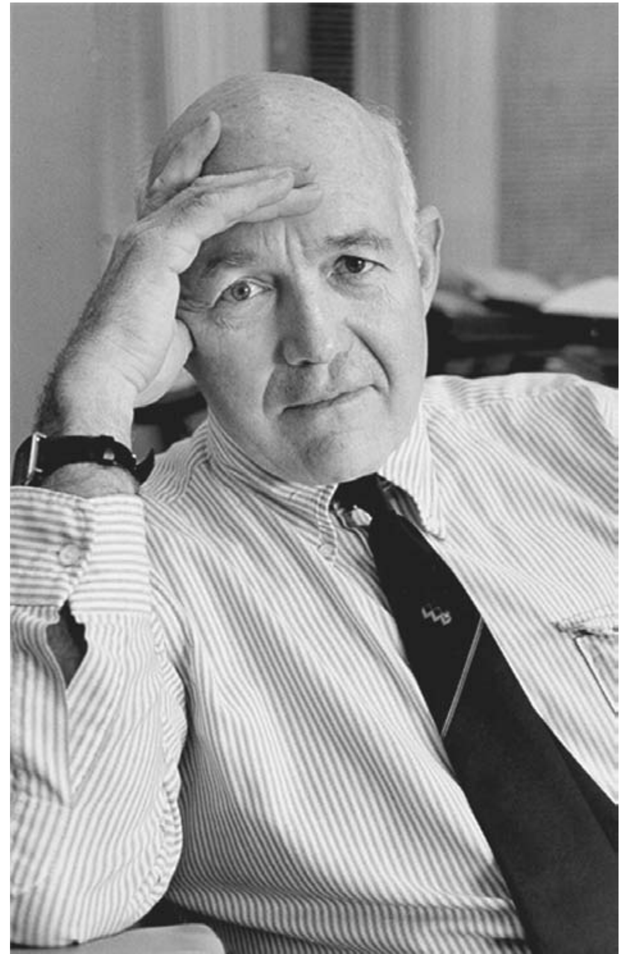
# COLEMAN, JAMES S.
## *1914–1996*

James S. Coleman (1926–1995) was one of the preeminent sociologists of the second half of the 20th century. His writings span many subjects including the sociology of education, mathematical sociology, political organization, diffusion of innovation, rational choice theory, and numerous other topics. He was born in Bedford, Indiana. He graduated from DuPont Manual High School in Louisville, Kentucky, in 1944, received a Bachelor of Science degree from Purdue University in 1949, and earned a Ph.D. in sociology from Columbia University in 1955.

During his studies at Columbia he was a research associate at the Bureau of Applied Social Research. His career of research and teaching was spent at the University of Chicago (1956–1959 and 1973–1995) and Johns Hopkins University in Baltimore (1959–1973). His contributions to understanding the life course and human development focus primarily on youth and adolescence, although his body of work is ultimately much broader and encompasses organizations and informal groups in addition to individual trajectories.

Along with many journal articles, Coleman's major publications on youth, adolescence, and education include *The Adolescent Society* (1961), *Equality of Educational Opportunity* (*EEO*, with Campbell, Hobson, McPartland, Mood, Weinfeld, & York, 1966), *High School Achievement: Public, Catholic, and Private Schools Compared* (with Hoffer & Kilgore, 1982), *Public and Private High Schools: The Impact of Communities* (with Hoffer, 1987), and *Parents, Their Children, and Schools* (edited with Schneider, 1993). Two important policy reports were *Youth: Transition to Adulthood* (1973) and *Becoming Adult in a Changing Society* (with Húsen, 1985). The publication of *EEO* was a monumental event that brought Coleman squarely into the media and policy spotlights. The report was one of the earliest examples of a large-scale social survey being used to shape public policy, and it challenged widely held assumptions about the dominance of school funding and teacher traits in determining student achievement. *EEO* emphasized the influence of family background and the characteristics of one's classmates on learning. The full body of Coleman's research, however, must be considered to appreciate his influence.

Without attempting to summarize all of Coleman's theoretical contributions and empirical findings on youth, adolescence, and education, a couple of dominant themes can be highlighted. First, Coleman was a keen observer of broad social changes occurring in the United States (and elsewhere) during the 20th century. He was fascinated by the dual advents (social inventions, really) of nearly universal participation in secondary schooling *and* adolescence as a distinct stage of life during which youth were segregated in formal institutions set apart from the rest of society. The broad lesson Coleman took away was that informal social systems would emerge within schools fostering values and norms among youth that would often be at odds with the formal goals of the adult-designed institutions.



***James Samuel Coleman.*** **PHOTO COURTESY OF THE ASA.**

Second, Coleman assumed social actors were goal directed and purposive. When his writings offered policy prescriptions, he urged designers of social systems to take into account the preferences and choices of actors. Wise designs of schools, workplaces, and other institutions of socialization would structure incentives in ways that would motivate people to work toward organizational goals.

An insightful essay by Heckman and Neal (1996) juxtaposes Coleman the rational choice theorist with Coleman the empiricist. According to these authors, Coleman the theorist consistently described goal-directed

actors and the primacy of people's choices made in response to incentives. Coleman the empiricist was a true inductive scientist, bringing his own hypotheses to a project but also learning from the data and revising his vision in light of the evidence.

Coleman was often criticized for neglecting to articulate explicit quantitative models suggested by theory before beginning data analysis. He was also criticized for not explicitly modeling the consequences of choices and self-selection into social settings; he left himself open to criticisms of not having properly separated spurious correlations from genuine causation. In response to the first criticism, both Coleman and Heckman defend splendidly Coleman's refusal to follow rigid econometric conventions (see Postscript 2 in Heckman and Neal, 1996). The second criticism is harder to dismiss.

In several essays late in his career, Coleman reflected on the themes and tensions in his collective works on youth and education. He saw great analytic power in how *The Adolescent Society* sought to understand youths' behaviors and outcomes only after conceptualizing and measuring the goals and interests of the youth themselves. Such work stressed the norms and bases of popularity characterizing social systems, and the social location of any particular actor within a social system. He saw considerable limitations to studies (including *Equality of Educational Opportunity*) that sought to explain youths' behaviors and outcomes as a function of, or measured against, administrative goals. Coleman fundamentally wanted to use schools as microcosms that could reveal more general principles about society at large. Given this goal, Coleman was aware insights are severely limited if the primary questions are, "What are the official goals of a school, and how well are these met? How effective are schools in facilitating or generating academic achievement? What inequalities exist in educational resources, and how do these translate into inequalities in the outcomes of schooling?" He was much more interested in discovering the emergent norms, values, bases of status, and social cleavages of adolescents' worlds—and how these shaped behaviors, attainments, and the community's functioning.

**SEE ALSO** Volume 1: *Cultural Capital; Intergenerational Closure; Parental Involvement in Education; Racial Inequality in Education; School Culture; Social Capital; Socioeconomic Inequality in Education.*

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***Stephen B. Plank***

## COLLEGE CULTURE

*College culture* refers to patterns of student life within a college or university campus. It encompasses *collective* behaviors and values—as distinguished from the mere compilation of *aggregate* data about numerous individual students. Furthermore, the concept emphasizes continuity of these social patterns, in contrast to transient or haphazard episodes. In sum, a college culture is a complex social network that endures over time through elaborate rituals and symbols. It includes, for example, inviting a student to be the member of a prestigious honor society or extending a pledge of initiation as part of a sorority or fraternity. It also includes the scars one acquires when turned down for inclusion in such groups. As such it has become an integral rite of passage for late adolescents in American society. Thanks to the seminal work of sociologist Burton Clark (1971), characterizations of college culture emphasize institutional belief and loyalty as central to affiliation. These help to create and to transmit a college's culture to newcomers over generations, contributing to a legendary memory about campus events, often called the "institutional saga."

An excellent source for literature review of college culture as explored from a variety of disciplines is the monograph by George Kuh and Elizabeth Whitt, *The Invisible Tapestry* (1988). Placing this concept within research on college students is covered in two classic works: Nevitt Sanford's anthology *The American College:*

*A Psychological and Social Interpretation of the Higher Learning* (1961) and, more recently, Ernest Pascarella and Patrick Terenzini's *How College Affects Students: A Third Generation of Research* (2005).

## HISTORICAL TRENDS

Observation of college culture has a rich tradition first associated with memoirs about clustering tendencies of students at medieval universities. At the University of Paris and elsewhere in Europe, migrating students formed associations reflecting their national roots. Banding together, they acquired distinctive colors and codes, giving rise to the characterization of "Town versus Gown." This distinguished local citizens from university students, who were required to wear academic gowns. Student clashes with landlords and merchants around charges of price gouging on rents, food, and wine, led to higher authorities such as popes, bishops, and kings bestowing permanent legal protections on university students. Within this framework of academic rights and responsibilities, student cultures flourished.

In contrast to the urban universities on the European continent and in Scotland, English universities around the 16th century underwent a structural change, and the college cultures within these universities veered in a new direction. At Oxford and Cambridge, the crucial unit became the residential "colleges" that formed a honeycomb within the university framework. So, although the university conferred degrees and administered examinations, undergraduate life and learning took place within a self-contained residential college. Each college had its own charter, endowment, faculty, curriculum, admissions plans, and traditions of student life. Construction of a spacious university campus and its college quadrangles gave rise by the late 19th century to an elaborate array of teams and clubs that were run by students, for students. A student could join with fellow debaters, athletes, or musicians whose shared experience often surpassed the formal course of studies as a source of a student's primary identity.

This "collegiate way" was successfully transplanted to colleges of the American colonies and, later, the United States (Rudolph, 1962). Groups formed within the college flourished as extracurricular activities and were a major source of socialization into American life. Student clubs at American colleges pioneered serious interest in reading and writing fiction, establishing book collections and libraries, projects in scientific field work, sophistication in debate, forming athletic teams, and discussing politics. There was a discernible life cycle to these student-initiated activities. After creation by students, the success of an activity led to attempts by administrators and faculty to prohibit the activities because they were seen as diverting student attention away from formal studies and even undermining the strict, formal mission of collegiate education at the time. Such interventions usually failed, as students persisted in forming renegade groups for literary societies, athletic teams, and publications. After presidents recognized the futility of suppression, they tried to salvage some official control by incorporating student activities into the formal university structure.

Faculty accounts of student life in the late 19th century invoked colorful metaphors. Undergraduates at Yale brought to mind thoroughbred ponies at play, cantering and frolicking (Santayana, 1892) in the campus meadow. Shifting from turf to surf, another depiction was that of fellow passengers in a boat—a common fate while rowing from freshmen to senior status. Students who had to drop out due to poor grades were mourned as sailors who had fallen overboard and missed all the good times (Santayana, 1892).

## COLLEGE CULTURE IN THE LIVES OF STUDENTS AND IN AMERICAN SOCIETY

A college culture socializes assorted students into a coherent group. In the United States this usually has focused on undergraduates. However, the concept is sufficiently elastic to include other constituencies, including graduate students and professional school students. Indeed, one of the classic studies of college culture is *Boys in White*, based on an ethnographic study of medical students at the University of Kansas (Becker, Geer, Hughes, & Strauss, 1961).

Sociologists Burton Clark and Martin Trow (1967) identified the concept of "student subcultures." According to their model, a campus was a fluid configuration of subgroups, many of which provided a student with a primary affiliation within the context of the general campus culture. This conceptualization allowed an analyst to impose a loose template on any particular college or university—and then refine the relative strength of each subculture both to confirm the universal model and simultaneously to capture the precise variations for the case study. Also, Clark and Trow's typology was neutral. It did not say that the persistence of a strong subculture of fraternities and sororities was good or bad; rather, the researcher had to identify and interpret on a case-by-case basis. It even allowed for subtle, important distinctions. One might find that a campus had a distinctive subculture—for example, being a place where performing arts enjoyed a strong tradition of prestige—yet there was no imperative that this same subculture would be—or should be—found elsewhere.

Although one can speak generally about a college culture, historians and sociologists have parsed this broad concept into components. Helen Horowitz (1987) characterized campus life, whether in the 17th century or 20th century, as having three layers: insiders, outsiders, and rebels. Groupings were related to prestige, power, wealth, race/ethnicity, and gender. She identified what she called the "College Men" as the group with inordinate power to set the tone and reward system for the entire institution. Later, with the emergence of women's colleges as well as coeducation, Horowitz noted that the "College Women" could be added to her original concept. "Rebels" referred to relatively small groups—ranging from reform-minded student editors to innovative clubs—who did not seek the affirmation of the dominant "inside" culture. "Outsiders" typically were those students denied full acceptance into the prestigious groups, suggested in the early 21st century by the social exclusion of "nerds" or racial minorities from fraternities and sororities.

## MAIN THEMES AND THEORIES IN RESEARCH

Central to research and theories on college cultures is that students have the power to create a world of their own within the institutional regulations and campus environment. One editor of *The Saturday Review* described college cultures to be no less than a "city-state" established by students within the institution (Canby, 1936). For students in the late 19th century the collective motto was, "Don't Let Your Studies Interfere with Your Education." Implicit in this good-natured banner was the serious fact that college culture was not the same as those of the faculty or administration. College culture demonstrated the ability to defer when necessary to official rules. Yet the enduring college was in the quite separate arena by and for students themselves. The college culture was sufficiently strong that it even led behavioral scientists to write about a "hidden curriculum" of what was taught and learned, as distinguished from the formal curriculum (Snyder, 1971).

If a college culture had the capacity to resist control by adult groups, it also had the leverage to split the student body into factions. Although admission to a college was supposed to provide entrée to campus citizenship, this usually worked only so long as a college was small and homogeneous. However, when enrollments expanded rapidly and included increasing student diversity in religion, ethnicity, family income, and geography, a major function (often a dysfunction) of college cultures was to break down shared experiences of students and to fragment them by exclusion within the campus. This relates closely to historian Horowitz's typology of insiders and outsiders within a student body. This was most controversial when membership in an internal subculture was based less on merit and more on ascribed characteristics.

The power of exclusion was a formidable detriment to integration of diversity for women and for racial and ethnic minorities. One partial response was for outsider groups to form their own subcultures. Hence, one finds exclusion from established fraternities may have led to creation of Jewish fraternities or African American fraternities as a counterbalance to the dominant Greek letter system. Cultural patterns reinforced by the Greek letter societies were complex. To one extreme, they were hailed for promoting loyalty to fellow members and teamwork. To another extreme, fraternities were often associated with encouraging ritualized student drinking and extended immaturity. In sum, the crucial research question was whether a college culture was inclusive or exclusive in campus life.

## NEW DIRECTIONS IN RESEARCH

The bulk of systematic research on higher education since the 1950s has drawn heavily from psychology and the behavioral sciences. Yet for the serious study of college culture, an appropriate and sorely needed discipline has been anthropology. Perhaps one of the most original and provocative studies of college cultures was the book by anthropologist Michael Moffat, *Coming of Age in New Jersey* (1989). Relying on strategies of fieldwork usually associated with the analysis of distant cultures, anthropologist Moffat chose to undertake an ethnographic study of a dormitory at a large state university—his own campus, Rutgers University in New Jersey. An important feature of the campus residence hall was that it was coeducational. Moffat focused on how young women and men cooperated to create an environment with norms and values in the relatively new format where members of both sexes shared living spaces. The findings were counter to fears of concerned parents and clergy. Coeducational dormitories did not promote licentious behavior or rampant promiscuity. To the contrary, students emphasized respect for privacy and mutual concern for the welfare of members of the dormitory community. Instead of amorous relations, men and women tended more toward sibling interactions of brothers and sisters. A promising sign of continued reliance on anthropology to study college culture is the recent book, *My Freshman Year* (Nathan, 2005).

The hegemony of such student organizations as Greek letter fraternities and sororities to dominate American college culture for centuries now faces a new perspective. Whereas selection into a fraternity or sorority was long seen by insiders and outsiders as advantageous

*College Students.* PHOTO BY LEITA ETHERIDEGE-SIMS. COURTESY OF LANCE LOGAN SIMS, MPH.

to adult affiliations and success, signs of change have surfaced. At the University of California, Santa Barbara, for example, data indicate that membership in a fraternity tended to be counterproductive as a base from which to gain campus leadership. At Yale there were surprising signs that seniors who had been "tapped" for membership in elite senior societies were making decisions that would have been unthinkable to earlier generations of undergraduates: Invitees were rejecting membership invitations. One explanation was that exclusive student groups not based on merit were seen as detrimental to adult life, especially public office, where discrimination by gender, race, religion, or ethnicity have become a liability. How this groundswell of refusal develops in the 21st century will be important.

A fertile area of reconsideration involves attention to students' family affiliations as part of college life, based on criticisms of an earlier model in which a new student who entered college was seen as poised to discard family affiliation to become a citizen in the campus (Tinto, 1987). Many sociologists saw this transitional split as necessary if students were to internalize new cognitive skills, values, curriculum, and networks. It was captured in the expression of "breaking home ties" as a feature of "going away to college." A revised perspective is that a fulfilling college experience need not require this break. For many students, maintaining family ties has been recast as helpful to navigating the new demands of campus life. This is an important deliberation given concern about undergraduate attrition and alienation (Braxton, 2000).

The diversity of American higher education also has meant that college culture requires recognition of new constituencies. Commuter students often have been ignored as marginal or disengaged. This neglect makes little sense if commuters dominate an institution's student profile. One novel study focused on "The Commuter's Alma Mater" to identify how nontraditional

students worked among themselves and with campus officials to reconfigure services and facilities to fit their social patterns (Mason, 1993).

Worth final note is that college culture is a topic long central to memoirs and fiction (Kramer, 2004). A challenge for social and behavioral scientists is how to give adequate consideration to this genre of American literature as an important source of data as part of their own systematic scholarly research. It could mean reliance on Owen Johnson's 1912 novel *Stover at Yale* to describe the round of life and values at Yale and other historic East Coast campuses prior to World War I. In the early 21st century, one might consider how well or how poorly a popular Hollywood movie such as *Animal House* provides a reasonably accurate portrayal of fraternities and sororities as strong influences on the college culture of a state university.

**SEE ALSO** Volume 1: *College Enrollment; Drinking, Adolescent; School Culture; Sexual Activity, Adolescent.*

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***John R. Thelin***

# COLLEGE ENROLLMENT

College enrollment entails taking classes at a college or university to fulfill the requirements for a bachelor's degree or associate's degree. In most cases enrollment for a bachelor's degree is done at a 4-year college or university that provides a general liberal arts education with a specific focus or major in preparation for a professional career. Enrollment for an associate's degree, in contrast, typically takes place at a 2-year community college where the focus is on preparing for midlevel and semiprofessional occupations in the local labor market. The boundaries between the two educational missions have eroded as the demand has increased for 2-year community colleges to provide remedial instruction to academically unprepared students who can transfer later to a 4-year college or university (Rosenbaum, 2001). College enrollment generally occurs in young adulthood in the years immediately after high school graduation, and students take an average of 4.6 years to complete a bachelor's degree and 3.6 years to complete an associate's degree.

In the first decade of the 21st century, college enrollment rose in the United States: Almost 15 million students were enrolled in 2005, up from 7.4 million in 1970. This was due in part to the economic and social benefits that accrue to those who earn postsecondary credentials. On average, recipients of a bachelor's degree have higher lifetime earnings and lead healthier, longer lives than their peers who have some or no college experience. Although the majority of college graduates do not go to graduate school, a bachelor's degree is a prerequisite for a more advanced degree and, on average, a more lucrative career in law, business, medicine, or science.

## HISTORICAL TRENDS

College enrollment, like school enrollment in general, is fueled largely by the demand for labor. Before the Civil War, when the domestic economy was driven primarily by manual labor and agriculture, the need for education beyond the primary years was low, and youths left school at an early age. After the war and into the 20th century, the industrial revolution brought a growing need for a more educated workforce as industry and large-scale manufacturing came to dominate the domestic economy. In response, school enrollment surged: In the Northeast,

the center of industrial production at that time, high school enrollment grew from 4.9% of youth in 1890 to 52% in 1940. Postsecondary education, however, remained the province of affluent young people who were preparing for white-collar professional jobs in business or medicine.

In the second half of the 20th century, the economy became increasingly reliant on technological, quantitative, and communication skills, and this created a demand for a college-educated workforce. Consequently, school enrollment among college-age youth rose dramatically: In 1950, 9% of those 20 to 21 years old, the prime college-going age, were enrolled in school. By 2000 that figure had more than quintupled to 48.7%. By 2004 the majority of high school seniors were enrolled in college (60.3%), making postsecondary enrollment the modal experience for young people after leaving high school in the United States. In light of those changes in the economy and the demand for labor, college enrollment as a distinct component of young adulthood and the life course more generally is, historically, a relatively new phenomenon.

## JUNIOR/COMMUNITY COLLEGE

One of the most notable recent changes in the postsecondary educational system in the United States has been the gradual growth in 2-year community college enrollment, which accounted for 43% of all postsecondary enrollment in 2005, up from 31% in 1970. These schools, which are funded by state and local government agencies, typically have open admissions policies by which all individuals regardless of academic proficiency can enroll in courses. Because of their affordability and accessibility, 2-year community colleges often serve economically and academically disadvantaged youths. In terms of their educational mission these schools serve a dual function: providing youth with basic skills and training for midlevel and semiprofessional occupations and giving less prepared youth an opportunity to acquire course credits and remedial instruction before transferring to a 4-year college or university. Two-year colleges thus serve both as labor market intermediaries and as part of the pipeline to a bachelor's degree. However, only 13% of youths who start off in these schools complete an associate's degree (Berkner, He, & Cataldi, 2002) and only 26% transfer to a 4-year college or university.

## COLLEGE ENROLLMENT IN THE EDUCATIONAL LIFE COURSE

The transition to college involves a unique set of changes that extend beyond the gradually increasing rigor of coursework that typically accompanies the passage from grade to grade. In high school most students work among a common set of teachers and classmates and take classes in one or two buildings. Academic progress is tracked by a guidance counselor or school administrator with whom contact is frequent and personal. Postsecondary institutions, in contrast, tend to be larger than high schools: The average public high school has approximately 760 students whereas the average 4-year public college or university has about 8,800. Because of their size, colleges have complex and often confusing bureaucratic mechanisms to organize and process students. For example, administrative necessities such as tuition and payments, course scheduling, and financial aid are housed in different offices or buildings, and a professor who may or may not teach students often serves as an academic adviser. The volume of students enrolled in a college often limits access to those resources and makes the interactions less personal.

The curricular organization of college, particularly with respect to time requirements and coursework, is less regulated than it is in high school; consequently, students have greater autonomy and more choices. For example, high school students generally are expected to be present on school grounds Monday through Friday, approximately between 8 A.M. and 3 P.M. (25 hours per week), whereas full-time college students spend less time in the classroom (typically 15 to 20 hours per week). In high school the curriculum is designed to meet state graduation requirements, and high school students thus have limited options in the courses they can take. In college the curriculum is organized to give students a core competency in a specific discipline, which typically is decided on during the first or second year of enrollment. In contrast to the more general subject matter in high school, the major-driven college curriculum gives students an opportunity to focus on their specific interests and develop skills unique to their planned occupations. Moreover, college students have more course options available to them and therefore have more flexibility to schedule classes so that they can meet obligations to their classes, families and friends, and, in many cases, jobs.

In addition to the structural and organizational changes, the transition to college marks the first time in the educational life course that the majority of enrolled students live outside their parents' or guardian's home while taking classes, mostly in dormitories and residence halls. Considered in the social demography literature a semiautonomous living arrangement, dorm life lacks the responsibilities associated with renting an apartment or owning a home but involves physical and emotional

separation from the family, an experience that is often daunting and stressful for those just out of high school. Historically, in the United States the move out of the parental home accompanied marriage, and together those experiences served as key markers in the transition to adulthood. As the age at first marriage has increased along with rates of college enrollment immediately after high school, the first forays out of the parental home have become linked more closely with college enrollment than with marriage.

## PERSPECTIVES ON COLLEGE PERSISTENCE

These structural, curricular, and organizational changes, which are most salient during the transition to college, often are overwhelming, particularly for disadvantaged and academically unprepared students. Thus, rates of college dropout are highest during the first year: Among first-time college freshmen enrolling immediately out of high school, 34.7% either dropped out at some point in the first year or did not return the next fall. Currently, only 13% of youths who attend a 2-year community college earn an associate's degree and about 51% of those who attend a 4-year college or university earn a bachelor's degree.

In light of the importance of a highly educated labor force and the socioeconomic benefits that accrue to those with a bachelor's degree, much theoretical and empirical attention has been paid to identifying the determinants of sustained enrollment, or persistence. Most research on postsecondary persistence is approached from one of three perspectives: the role of social structure, individual ability and preparation, and the relationship between the student and the university.

A social structural approach, which is informed by the conflict perspective in sociology, implicates college enrollment and persistence in larger processes of educational stratification. With limited slots available in the higher education system, inequalities in social status, particularly race/ethnicity and socioeconomic background, lead to an unequal allocation of students to institutions of varying stature and quality; this creates very different enrollment experiences. For example, racial/ethnic minorities and less affluent students are more likely to enroll in public schools, 2-year community colleges, and academically less selective schools (Karen, 2002), which tend to have fewer support systems and resources than do private and more academically competitive colleges. These institutional differences exacerbate the difficulties associated with the transition to college and thus contribute to different rates of persistence. Among students entering college in 2003–2004, 43.4% of Blacks and 37.2% of Hispanics left college without a degree within the first 3 years compared with 31.2% of Whites. Similarly, 43.7% of students whose parents did not attend college left college without a degree within 3 years compared with 17.7% of students whose parents earned bachelor's degrees.

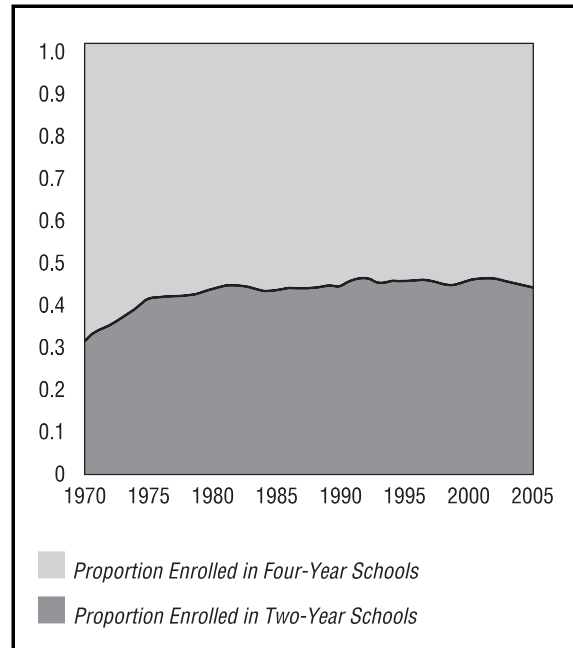


***Figure 1.*** *Proportion of total postsecondary enrollment, 1970–2005.* CENGAGE LEARNING, GALE.

Whereas structural explanations emphasize allocation processes that are determined by ascribed characteristics (characteristics one is born with), individual-level perspectives focus on achieved characteristics such as academic preparation and orientation toward the future. Most of this research is informed by William Sewell and colleagues' Wisconsin Model of Status Attainment, which was one of the first empirical studies that used longitudinal data to identify the individual-level mechanisms that link family background with educational attainment (Sewell, Haller, & Portes, 1969). Their analyses showed that strong academic preparation in school (as measured by grades and/or standardized test scores) and ambitious plans for one's future education (as measured by how far students expected to go in school) were strong predictors of how far individuals would progress in the educational system. Those relationships have been replicated in a large body of research within the sociology of education: Students who have a solid foundation in academic subjects and who express commitment to higher education before they enter are best able to navigate the transition to college and persist through degree completion (Deil-Amen & Turley, 2007).

In contrast with the structural and individual perspectives, which emphasize characteristics of students

before they enter college, more recent research in the higher education community has explored the emerging relationships students have with the university, particularly the process through which students integrate into the academic and social communities of a school (Tinto, 1993). Upon entry into college, students are detached physically and/or academically from the communities of their past: their families, high schools, and peer groups, as well as their local areas of residence in many cases. This transitional period tends to be isolating, stressful, and disorienting as entering students encounter the structural, organizational, and housing changes described above. Consequently, it is at this time that students are most likely to drop out. However, once students establish and maintain relationships with faculty members, school personnel, and classmates, they feel a stronger bond with and commitment to the university and are more likely to remain enrolled.

Although they have different emphases, these three perspectives complement one another in that the identified characteristics and processes often work in tandem. For example, racial/ethnic minorities and young people with limited economic resources tend to receive the poorest academic training in the elementary and secondary years and as a result are less ready for the rigor and demands of the college curriculum. If these students enroll in college, they usually attend less competitive schools such as 2-year community colleges, which provide fewer opportunities and resources to facilitate integration. With limited preparation before enrollment and less contact with classmates and faculty once they are enrolled, disadvantaged youths are the most likely to leave before finishing a degree. In this way college enrollment intensifies educational stratification processes rooted in a person's social origins and serves to reproduce existing status differences in adulthood.

Once students weather the transitional obstacles associated with the first year, the odds of persisting until degree completion increase substantially. For example, 74% of students who enroll continuously without a break in enrollment in a 4-year school complete a bachelor's degree compared with 20% of those who take a break in enrollment of 4 months or longer.

## DEVELOPMENTAL GROWTH

Although persistence is one of the most frequently studied outcomes because of its bearing on degree completion and socioeconomic well-being in adulthood, other important developmental changes accompany the college enrollment experience. With respect to academics, as students work their way through their degree requirements, they increasingly focus on courses within their majors and as a result develop more specialized skills and proficiencies. Many students participate in internships and co-op programs that provide real-world experience that sometimes leads to full-time work after graduation. These curricular and noncurricular experiences are associated with growth in abstract reasoning and communication skills and an intellectual orientation toward problem solving (Pascarella & Terenzini, 1991).

College students also form health and lifestyle patterns that are shaped by their environment and position in the life course. With less parental supervision and, for most on-time traditional students, without the full responsibilities of a family or career, many college students experience a prolonged adolescence in which they have greater freedom to make choices about their behaviors and activities. In some cases this autonomy can compromise the health of enrollees. Between 1989 and 2001 the number of students on campus seeking help for depression, stress, anxiety, and eating disorders rose substantially. Moreover, compared with their nonenrolled peers, college students are more likely to binge drink and gamble.

## THE CHANGING POSTSECONDARY LANDSCAPE

As enrollment has grown and the role of colleges as a central institution in young adulthood has emerged, a host of changes have continued to alter the postsecondary landscape. For example, although they historically enrolled at lower rates, women reached parity with men by the late 1970s and gradually began to surpass them. In the first decade of the 21st century, women had a sizable enrollment advantage: Among graduating seniors in 2004, 74.8% of women enrolled in college compared with 65.4% of men. Despite this progress, women remain less likely to major in science and engineering, majors that lead to highly valued and compensated jobs in a global, technology-driven economy.

At the same time that college is becoming a prerequisite for socioeconomic well-being in adulthood, it is becoming more expensive. In the 2006–2007 school year, tuition at 4-year public schools accounted for 12.1% of median family income, up from 4.9% in the 1976–1977 school year. If this trend persists without options for financial aid that keep pace with it, the role of college in reproducing inequality will expand rather than narrow.

Two-year community colleges provide a more affordable alternative to 4-year colleges and universities, an option that is particularly attractive for those with limited economic resources (Dougherty, 1994). Enrollment in these schools has risen, accounting for 56.6% of all postsecondary enrollees in 2005, up from 31.4% in 1970. In addition, there are increasing opportunities to

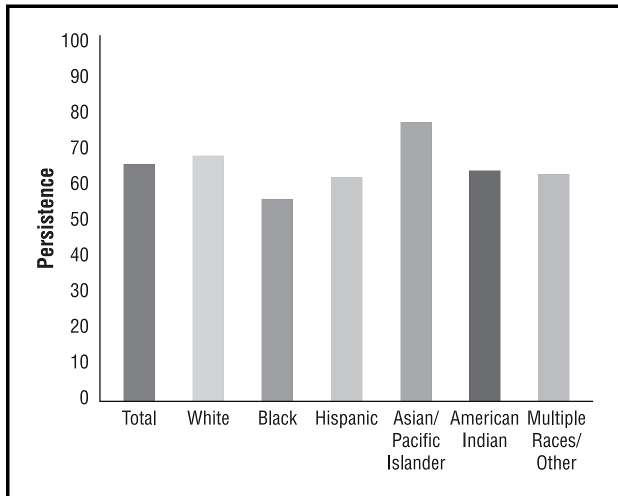


***Figure 2.*** *Rates of Postsecondary Persistence for 2003–2004 Beginning Postsecondary Students, as of June 2006.* CENGAGE LEARNING, GALE.

enroll in shorter-term programs that award specialized certifications in fields such as information technologies and paralegal services (Deil-Amen & Rosenbaum, 2003).

As new technology and innovative methods of production continue to dominate the economy, the need for new and adaptable skills has implications for older workers, who often lack those skills. Colleges have responded to this change by reaching out to adults in need of skill development and/or retraining. In 2005 those age 25 or older accounted for 17.7% of all undergraduate enrollees. In addition to affecting labor demand, technology has altered the way postsecondary education is administered. Many courses use the Internet for lectures and assignments, and nearly all university libraries are linked to an expansive network of cyber-repositories. Additionally, online programs and distance learning are readily available; 89% of public 4-year colleges and universities offer some form of distance learning.

As these and other trends continue to alter the postsecondary landscape, college enrollment as a distinct component of young adulthood—an economically feasible experience immediately after high school that is centered on a physical campus—may give way to new forms of training and skill development and consequently may have different implications for the relationship between higher education and the life course.

**SEE ALSO** Volume 1: *Academic Achievement; Cognitive Ability; College Culture; Gender and Education; High-Stakes Testing; Policy, Education; Racial Inequality in Education; School Tracking; Socioeconomic Inequality in Education;* Volume 3: *Lifelong Learning.*

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***Robert Bozick***

# CONSUMPTION, CHILDHOOD AND ADOLESCENCE

The lives and experiences of children and adolescents cannot be understood with any depth without accounting for and addressing the world of commercial goods and media in which they are situated. Historically speaking, the world of consumer goods increasingly has come to define the contours and content of childhood and adolescence. Over the course of the 20th century and into the 21st, commercial products, retail spaces, advertising, marketing, and media not only have provided the

markers of various age-based identities but also have helped delineate and create some of the widely recognized stages of the early life course—such as the toddler, "tween," and teenager. Children and adolescents, as well, have taken an active part in the historical shaping of the life course in their changing roles and activities as consumers and audiences.

## HISTORY OF YOUTHFUL CONSUMPTION

At the opening of the 20th century, commercial interest in children was generally sparse and unremarkable. In the United States, some goods for children could be found advertised in a few magazines for parents, on select shelves in department stores, and described on a few pages in mail-order catalogs for companies such as Sears, Roebuck or Montgomery Ward. Products for children at this time consisted of some ready-made clothing; breakfast foods such as cold cereal or hot oats; simple toys such as dolls, hobby horses, and gun-and-target sets; books; and nursery ware (Cook, 2004; Cross, 1997; Jacobson, 2004; Kline, 1993; Leach, 1993). Besides the candy counter in drug and general stores, few, if any, commercial spaces were designed with children in mind or intended for their patronage.

By 1920, creating markets for children's goods had become an increasingly collective, organized, and purposeful endeavor. Merchants and manufacturers instituted trade organizations and published trade journals as a way of coordinating efforts to capture the child and mother trade. By this time, a number of industries had come to recognize children and mothers as key patrons for their products and had organized themselves to cater to these new clienteles. The toy industry led the way with *Toys and Novelties Playthings* in 1903 and *Toys and Novelties* in 1909. The first trade journal devoted exclusively to children's clothing, *The Infants' Department*, began publication in 1917. In 1924, the *Horn Book* was founded to promote books for children, although as early as 1874 *Publishers Weekly* listed children's books.

Consumption, goods, and commercial contexts prove to be significant factors in shaping the understandings of childhood and youth and in fact the very definitions, boundaries, and transitions between stages or phases of the early life course. This effect was felt in the 1920s and 1930s as the United States toy industry positioned itself and its products as integral to the "healthy" and "appropriate" development of children. According to Ellen Seiter (1993), the growing toy industry was buttressed by a new ethos of hands-on parenting promulgated by *Parents* magazine (est. 1926). This new parenting brought the relatively new theories of developmental psychology into the marketplace by popularizing the "idea that childhood is divided in to discrete, observable stages" that can be supported and even hastened by giving the right toy to a child at the right time in her or his growth (p. 65).

The children's clothing industry played a similar but distinct role in helping to reshape childhood, particularly girlhood. In 1920 only three size ranges in girls' clothing existed—newborn to 1.5 years, 1.5 years to 6 years, and 6 to 14 years. By 1950 there were seven size ranges: infant, toddler, children's, girls', subteen, junior miss, and miss, which covered girls from birth through about age 16. The increasing differentiation of the life course for young females over this time stemmed in part from age grading in the educational system—for example, nursery schools, kindergartens, and middle schools—and their ensuing effects on the social lives of girls. The finer distinctions in clothing sizes and styles both reinforced and helped produce differentiations in age and social status in American girlhood. Merchants in the 1930s, 1940s, and 1950s reported that girls often sought to "jump" to "more sophisticated" styles in order to appear older than they were, actions that prompted merchants, and eventually manufacturers, to add new styles or change age-style designations to accommodate the girls' behavior and preferences.

The cases of the toy and clothing industries point to a general feature of child and youth consumption—namely, that advertising and marketing appeals often include parents as well as children. The historical inclination and impetus, however, has steadily and strongly favored addressing and appealing to children directly, instead of or in addition the parent. The middle-class home had become a site of sentimental domesticity—an emotional haven set apart from the cold, calculating world of work and money—and thereby increasingly oriented toward children's wants and desires. This attitude paradoxically also helped shape the emerging world of consumer goods and spaces for children (Cook, 2004; Zelizer, 1985).

Throughout the 1920s and 1930s, children's goods in department stores steadily acquired their own spaces, child-oriented iconography, specialized personnel, and selling techniques as well as their own separate departments. Some stores dedicated entire floors to juvenile merchandise. More than simply housing children's goods, the overall layout, the height of the fixtures and mirrors, and the color schemes of these departments and floors were designed intentionally to appeal to the child's point of view, rather than that of the mother, with the express purpose of inducing children to request goods from their mothers. A similar impetus to appeal to the child directly could be found with the rise of radio in the 1920s and the concomitant child-specific programming that ensued (Cross, 1997). In addition, comic books, films made for children's viewing, and later television

programs arose and configured themselves with a child audience and child market in mind.

Appealing to and addressing children and youth as direct and primary consumers had the cumulative effect of identifying and defining youth and childhood as distinct and internally differentiated phases of life identified by increasingly nuanced, age-graded goods, media, and commercial spaces. The designation of the "the toddler," for instance—which is now a general, named stage of the life course—arose initially almost entirely as a merchandising and manufacturing category of children's clothes (Cook, 2004).

The rise of teenagers and their accompanying youth culture in the 1950s and 1960s represents perhaps the most prominent example of the convergence between consumer culture and the formation and expression of age-based identities. The teenager came into prominence beginning in the mid-1940s. A new national media for teen girls cultivated an audience of peers with the publication of *Seventeen* magazine in 1944, followed by *Miss America* and *Junior Bazaar* in 1945. Grace Palladino (1996) discusses some of the various versions of teenagerhood in the 1950s, including swingers, bobby soxers, and hepcats, whose subcultural lingo, comparatively open sexuality, and freedom worried many parents and schoolteachers. Teenagers and youth in the 1960s and early 1970s took their place on the national stage as visible proponents and symbols of counterculture rebellion.

A cultural phenomenon, "the teenager" has come to represent a new kind of adolescence realized through the medium of consumption of such things as fast food, rock music, distinctive dress, and forms of speech that differentiate their world from that of adults. High school—the institutional "home" of adolescent culture—provides for peer contact among teenagers and the regular opportunity to gauge oneself vis-à-vis others. In ensuing decades, the experiences one has in high school are heralded by psychologists, educators, and in the popular imagination as some of the most important of one's youth and perhaps of one's life. The dramas and rites surrounding prom night, with its focus on heterosexual dating, conspicuous display, and expectations of romance, become stories relived and retold, for better or worse, throughout one's adult life (Best, 2000). The social divisions and social labeling that occurs during adolescence often take place in the context of the high school social relations and interactions. As Murray Milner, Jr. (2004) discussed, "geeks," "freaks," "cool kids," and "brains"—social types typically found in American high schools—acquire social definition in contrast to one another by displays of taste through popular culture goods.

The dominant trend of the relationships among consumption, childhood, and adolescence over the first seven decades of the 20th century was one in which commercial goods and contexts, in part, shaped and created new categories and understandings of the early life course. Many of these age designations—as found with and through various means of consumption—helped define childhood or youth in contradistinction to adults and, in so doing, delineated various, more or less bounded identities of adolescence and childhood.

***Toy Debut.*** *Two children look at a new toy.* AP IMAGES.

By the 1980s, observers and commentators expressed concern about the apparent "loss" of childhood. Neil Postman (1982) famously argued that childhood was disappearing due to the predominance of electronic media—particularly television. Television, unlike print media, does not require language literacy to be consumed and so does not effectively pose a barrier to participation. As a "total disclosure medium," contended Postman, television opens the "back stage" of adult society to children—that is, depictions of and discussions about sexuality, money, parenting strategies—that used to be gradually and deliberately revealed to children by adults. Hence, childhood is losing its distinctiveness. Joshua Meyrowitz (1985) offered an alternative view that, instead of a one-way movement of childhood disappearing into adulthood, adults are also behaving and dressing in ways traditionally associated with children; hence, he argued, it is more useful to pay

attention to the blurring boundaries between childhood and adulthood.

### YOUTHFUL CONSUMPTION TODAY

Concerns about the loss or blurring of childhood in the late 20th and early 21st century continue to be voiced by academics, educators, politicians, and parents with increasing alarm. The rise and ubiquity of digital media—in particular, the Internet—shatters barriers to various kinds of information in ways that make broadcast television's break from print media seem minor, because the Internet, unlike television, does not determine the direction of the flow of information. Twenty-first century moral panics about children's ability to access materials deemed unfit for them, such as pornography, sit side-by-side with concerns about how children can be accessed and tracked by sexual predators as well as by marketers, requiring children to be knowledgeable about and prepared for such eventualities.

The phenomenon of "kids getting older younger" arose in the 1990s in light of concerns about the apparent "adultification" of children and youth. Much of this concern has, as in the past, focused on girls and sexuality. Observers point to girls as young as 9 years old discarding Barbie dolls as "babyish" in favor of Bratz dolls, whose style and "attitude" are said to be flamboyant, "street," and sexual, as an indication of age blurring. The term *tweens*—boys and girls approximately 7 to 12 or 13 years old—was coined initially by marketers in the early 1990s but has since become an accepted designation by adults as well as children for this age range (Cook & Kaiser, 2004). The clothing and personal styles of tween girls remains a constant topic of concern for mothers and in public discussion at stores such as Claire's, an international chain, that offer a variety cosmetics, jewelry, and lace underwear for preteen girls. In the 21st century, some parents take their prepubescent children to spas for makeovers, pedicures, and other body treatments once thought the reserve of adult women. For boys, much of the concern centers on exposure to violence in digital video games and to sexualized images of girls and women.

The cultural landscape of childhood and youth remains in a state of flux in large part because the various stages and designations of the early life course are now thoroughly enmeshed with the goods and images of the commercial marketplace. Public concern about the over-commercialization of childhood and adolescence has spurred public discussion about the role of advertising and marketing in public life. Social critics such as Juliet Schor (2004) argue that the overall materialistic values promoted by advertisers and marketers have a negative effect on children's self-image, their physical health, and their relationship to peers and family. Beyond a few safeguards such as rating systems for television, films, and video games and limitations on what kind information can be collected from children on the Internet, few public policy initiatives are in place that address children and commercial life to any significant degree.

SEE ALSO Volume 1: *Activity Participation, Childhood and Adolescence; Body Image, Childhood and Adolescence; College Culture; School Culture; Media Effects; Peer Groups and Crowds.*

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***Daniel Thomas Cook***

## CRIME, CRIMINAL ACTIVITY IN CHILDHOOD AND ADOLESCENCE

The brute fact of age always complicates efforts to understand the nature of crime and victimization. Study upon study shows criminal behavior to increase steadily

through the adolescent years, peak in late adolescence or early adulthood, and then decline rapidly and steadily through the remainder of the life span. Although the generality and stability of this trend has provoked controversy, the general conclusion that crime is strongly clustered in adolescence is not seriously in dispute. That offending typically occurs so early in the life span makes it particularly significant for life course scholars, both for understanding what factors influence crimes among teens and for its implications for the unfolding life course.

Although seldom explicitly acknowledged, the age distribution of crime has organized much criminological research. Most importantly, it has meant that the study of crime, at least for much of the 20th century, has been the study of juvenile delinquency. Here, researchers traditionally focused on teenagers and sought to understand what differentiates offending among them. Early studies in the social ecology of crime used arrest statistics of juveniles from police to develop a general theory of social disorder and crime (Shaw & McKay, 1969). Yet in the 1950s and 1960s, arrest data fell into disrepute as social scientists drew attention to the organizational factors that influenced their collection and suggested, with powerful consequences, that such data told much more about the activities of the police than about the criminal activities of individuals. In light of this, researchers increasingly turned to self-report surveys to study crime, but again focused their attention almost exclusively on the activities of adolescents. Regardless of the overall pattern of offending over the life span, the main focus of researchers was crime among adolescents, and explanations of such crime were used, for better or worse, to explain offending in general.

The traditional focus on juveniles has shaped both how crime is understood and how it is studied. In the latter respect, researchers have focused on measuring juvenile delinquency. The concept of juvenile delinquency is interesting. In one respect, it encompasses many of the behaviors that both the public and social scientists regard as crime. This includes actions such as vandalism, theft, violence, and drug use. At the same time, it also includes behaviors that are often seen as outside the domain of official crime statistics, such as skipping school, cheating on tests, breaking curfew, drinking, and even smoking. To make matters more complicated, serious efforts to compare the types of acts captured by self-report survey studies with acts that routinely appear in police and court data conclude that there are some significant differences in both the range of acts under study (typically excluding white-collar crimes such as fraud and embezzlement) and the severity of incidents (typically excluding serious violence such as aggravated rape and murder). Still, the most thorough assessments also conclude that there is nothing inherent in self-report approaches or the study of juveniles that precludes investigation of the severity or range of youthful deviant acts. Instead, it is more a question of what types of issues the researcher wishes to study and what types of populations (i.e., school, street, or incarcerated) of adolescents are included.

## TRENDS IN JUVENILE DELINQUENCY

Studying delinquency over time is complicated by the fact that definitions of offending, as well as social policy regarding adolescent offenders, have been quite variable. In some time periods, societies were quite resistant to the idea of criminalizing adolescent behavior and would often go to quite elaborate lengths to ignore or downplay juvenile delinquency. The "decriminalization" of delinquency in the 1970s and early 1980s, for example, saw the widespread adoption of policies designed to divert delinquents away from the courts and prisons. In contrast, more recent years, including much of the 1990s and early 21st century, have seen a hardening of attitudes and policies such that adolescents are increasingly subject to the criminal justice system.

In light of such historical variability, criminologists interested in trends over time typically look to homicide data, given that homicides are particularly visible to law enforcement (i.e., very high rates of detection and reporting), police have little to no discretion for such offenses, and definitions are very consistent over time and across jurisdictions. Drawing upon such data, most criminologists agree that while the overall pattern of offending across the age span and the general concentration among adolescents has not changed appreciably, there have been some notable historical shifts in the overall volume of delinquency. Contrary to much theory and expectation, the decades following World War II (1939–1945), a period of considerable prosperity, saw significant increases in rates of delinquency. After this, rates stabilized through the early 1980s, but then dramatically increased through the early 1990s.

Drawing upon data from the Federal Bureau of Investigation's supplemental homicide report (2003), the number of juvenile homicides rose from approximately 1,000 in 1984 to more than 3,600 10 years later. Equally interesting, as quickly as juvenile homicides increased, they decreased. After peaking in 1994, homicides showed steady and consistent declines through the late 1990s and early 21st century, such that homicides, as well as rates of juvenile violence more generally, are as low at the start of the 21st century as they have been at

any point since the early 1960s. While a variety of explanations have been offered, there is considerable consensus that the homicide boom and bust was a simple function of the rapid spread of crack cocaine and the resulting "arms-race" among inner city males and the equally rapid decline in the popularity of crack, stabilization of the drug trade matured, and large scale incarceration.

## THE DEMOGRAPHY OF DELINQUENCY

Any understanding of the nature of delinquency begins with accounting how much offending actually takes place and how specific groups are differentially involved. In the first respect, minor delinquency is quite common in that almost everyone commits *some* delinquent act at some point in their adolescent years. Here, most surveys show that upward of 90% of teenagers have hit someone, stole something, damaged or destroyed property, or used drugs and alcohol at some point during their adolescent years. At the same time, serious delinquency is very rare given that very few adolescents engage in serious, frequent offending and even fewer engage in the most serious forms of violence. In light of this, it is useful to consider the general demography of offending, and focus attention on both the more mundane and more serious types of delinquency.

One important aspect of delinquency is the pervasive and enduring sex differences in offending. Considering homicide, males accounted for 92% of all offenders, outnumbering females by more than 9 to 1. Sex differences are also prevalent among more common types of delinquency. For example, Howard Snyder and Melissa Sickmund (2006) report that almost twice as many males (11%) as females (6%) belong to gangs, have vandalized property (47% compared to 27%), or sold drugs (19% compared to 12%). Differences are even smaller with respect to theft and assault. Overall, males are much more likely to be involved in delinquency than females and such differences are evident across a range of contexts and time periods.

A second demographic feature of delinquency, and arguably more contentious, is racial differences in delinquency. On one hand, researchers have amassed considerable data showing significant race differences in offending. On the other hand, critics argue that data showing race differences comes from agencies, notably police and courts, that have historically shown significant biases against racial minorities. Starting with homicide, African-American adolescents account for one-half of all juvenile homicides, even though they account for only 14–15% of the adolescent population. White adolescents account for the vast majority of other teen homicides (47%), whereas Asian Pacific Islanders and American Indians account for 1% and 2%, respectively. For other offenses and delinquency measured through self-report, race differences are less extreme and considerably more variable. For example, while twice as many African-American adolescents have been suspended from school when compared with Whites (56% compared to 28%) and African-American adolescents have higher rates of assault (36% compared to 25%), differences for vandalism, theft, and drug dealing are more similar across each race (Snyder & Sickmund, 2006). In general, there is a consensus that African Americans are slightly overrepresented among adolescent offenders.

A final feature of the demography of delinquency is the age patterning of offending within adolescence. The distribution of delinquency through adolescence is important to consider, especially because certain crimes (e.g., drinking and *soft* drug use) may be gateways to more serious offending (e.g., *hard* drug use or robbery). For homicide, it is clear that offending increases with advancing age through adolescence. For example, those 13 years of age have rates of offending of only 0.32 per 100,000. This increases to 1.16 for 14-year-olds, 2.29 for 15-year-olds, and 4.08 for 16-year-olds. By age 17, the rate of homicide offending is 28 times greater (9.00) than that of 13-year-olds. Other arrest data such as that from the Federal Bureau of Investigation (2003) suggest a similar pattern, whereas self-report data, again, is more varied. That offending increases through adolescence features prominently in life course and developmental theories, as well as criminal justice policy, although its exact implications are still being debated.

## DELINQUENCY AS BEHAVIOR: UNDERSTANDING THE FACTS

Although there are a number of important theories and a long tradition of testing theories of crime, several scholars have noted that all theories seem to have reasonable empirical support. When such claims are subjected to scrutiny, it quickly becomes apparent that most researchers typically attribute particular variables to particular theories, find some statistically significant association, and conclude empirical support for the theory. Unfortunately, such conclusions lack credence when one recognizes that variables have various meanings and interpretations, and that the broad expectations of any given theory require more than just the presence of a particular association.

Consider, for example, the almost universally observed finding that delinquents have delinquent peers. Many researchers find this association, attribute it to the social learning camp (i.e., that young people learn deviant behavior from their deviant peers), and then conclude strong support for social learning perspectives (Akers, 1998).

***Juvenile Offenders.*** © BILL GENTILE/CORBIS.

The skeptic, however, might suggest that (a) having delinquent peers implies nothing about their capacity or activity in teaching criminal values and behavior; (b) friendship patterns are not randomly occurring, and individuals select and are selected into peer groups based on characteristics such as shared values and shared interests (e.g., delinquency); and (c) reporting delinquent peers may itself be reporting delinquency given that much delinquency occurs in groups (i.e., co-offending). Acknowledging such considerations casts doubt on delinquent peers as evidence of social learning and thus challenges its contribution to the overall support of social learning perspectives.

An alternative way of thinking about empirical support is to consider the key aspects of criminal behavior and ask what theory (or theories) best accounts for such facts. Several features are noteworthy. First, crime as an activity requires very little time commitment. Even among the most extensive and hard-core delinquents, the vast majority of their time is spent on noncriminal endeavors. Second, there appears to be virtually no specialization in offending. The teenage robber is also stealing property from houses and cars, illegally selling guns, skipping school, getting into fights, vandalizing property, and using drugs and alcohol. Third, most juvenile delinquency involves co-offending; that is, it tends to be a group activity. Fourth, the social networks and peer relationships of delinquents are quite porous and ephemeral. The peer group of any adolescent, let alone a delinquent one, includes a mix of delinquent and nondelinquents; and adolescents, including delinquent ones, change peer groups with considerable frequency.

Fifth, efforts to actually show a well-defined learning process among delinquents have generally failed. Delinquents clearly have delinquent associations, but the role of delinquent attitudes and beliefs is much more equivocal (i.e., delinquents show the same conventional values as nondelinquents) and little evidence exists of tutelage and reinforcement. (In contrast, evidence abounds about the intensive and extensive efforts of parents and teachers to promote prosocial, antideviant behavior.) Sixth, delinquents clearly have weaker connections to conventional institutions. Their popularity among peers is questionable, they are less connected to and involved with parents and family, they do worse in school, and they are less involved in a range of school-like activities. The latter

point may be particularly important because it suggests that delinquents may be poor learners when compared to nondelinquents. This raises an interesting dilemma for theories that emphasize positive socialization—given that successful socialization of any sort requires that one is a capable learner. Finally, delinquents clearly have a wide array of social strain (e.g., poor peer relationships, greater family conflict, and poor grades). Yet the link between strain and delinquency is heavily contingent upon propensity to engage in delinquency. In other words, not all people react equally to strain and those who already show delinquent tendencies are most likely to adopt delinquent "solutions" to their problems.

The patterns described above are not in serious dispute and, in the aggregate, highlight three important features of criminal behavior. First, it is difficult to see evidence of significant and successful socialization among deviant youth. Clearly, deviance can be and is a group activity among adolescents. But this does not imply that deviance is a product of successful socialization of any meaningful sort. The social networks of delinquent adolescents are not necessarily conducive to strong and effective socialization, particularly socialization that would (presumably) counteract the influence of all prior and all peripheral socialization. The evidence of extensive or profound value commitments among delinquents is sparse at best and connotes the idea of a failure of socialization rather than a success.

Second, crime and delinquency appear as remarkably simplistic activities with nothing of substance to learn. Any random individual already possesses most, if not all, the necessary skill for virtually any delinquent endeavor. Moreover, even if someone did need to learn some type of crime, it would not be difficult or require extensive tutelage. The (fragile) networks of adolescents are characterized by a generality of deviance that is a mixed bag of petty violence, pecuniary offenses, destructive acts, and substance abuse.

Third, there are important differences in the social relationships of delinquents and nondelinquents, with respect to families, peers, friends, and authorities. Adolescents are not really delinquents as much as they drift between delinquent and conforming behavior, between delinquent and conventional social groups. Indeed, the fact that this encyclopedia entry repeatedly refers to *delinquents* throughout the discussion should be seen as nothing more than a shorthand convention for the more accurate designation of "those more likely to engage in delinquency."

So what perspective best accounts for the key features of crime in the early stages of the life course? For several decades, some criminologists argued that traditional theories of crime have asked the wrong question in focusing on why people commit crimes. Instead, control perspectives begin with the question of why people *do not* commit crimes. Here, the starting point is that the intrinsic benefits of crime are self-evident and widely applicable. Violence is a response to social disputes that does not require patience or understanding. Theft provides immediate rewards to the offender without the requirement of hard work, significant effort, or long-term investment. Drugs and alcohol provide quick highs without concern for the future or its effects on others. Indeed, a wide variety of crime is thrilling and exciting (and the prospect of getting caught or besting police and law enforcement merely add to the thrill) for some youths. Control theories emphasize the idea that crime is *not* like all other behaviors in that it is intrinsically a self-interested activity, requires no real skill or planning, and provides immediate benefits to the offender.

In offering such a view of crime, control perspectives focus on the idea of restraint. If crime is intrinsically rewarding and is so for most young people, what is it that restrains people from engaging in it? Travis Hirschi's (1969) seminal contribution, *Causes of Delinquency*, answered this question by emphasizing the power of the social bond. Specifically, Hirschi argued that if crime is really just self-interested behavior, individuals are free(er) to act in such a way when their bond to society is weak or broken. Social bonds, according to Hirschi, involve the following:

- Attachment to others in society that makes one sensitive to the opinions and values of others;
- Commitment to conventional activities that involve investments of time, energy, and self that ultimately are *costs* in the face of engagement of crime;
- Involvement in conventional activities that make a person simply too busy to engage in deviant behavior;
- Belief in the values of the dominant society, values that are common within the society or common within the social group.

The key distinguishing feature of control perspectives is that they assume social values are inherently against crime, that no social group could be organized by criminal values (and thus values such as the Hollywood stereotype of organized crime as hierarchical, structured, and efficient is quite literally fiction), and that socialization, particularly effective socialization, will be inherently against crime. Thus, individuals who violate the values of society do so because they are not committed to others and their values and are thus more immune from social influence. It is this that frees them to act in their own self-interest. From this perspective, crime is

neither forced nor required and thus it is really a question of more or less likelihood of deviant behavior. For the contemporary adolescent, the issue is how attached, committed, and involved they are with school, peers, and families and how these determine their likely involvement in crime.

Future work needs to recognize the behavioral reality of adolescent delinquency and consider the ways in which it is connected to early life experiences and later life outcomes. While such work is clearly on the table, the vitality of future research will depend heavily on the degree to which theory and research recognize the capacity of individuals as actors at any given age and how they select and accept or avoid and challenge the socialization efforts of those around them. Ironically, scholars have for more than a century viewed adolescence as a period of "storm and stress" (Hall, 1904), but have been remarkably reticent to consider the full implications of this. From a control theory perspective, any understanding of offending in adolescence and over the life course would benefit greatly from a questioning of the power and practice of socialization and the recognition of individuals as constructors of both their life circumstances and their activities.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Juvenile Justice System; School Violence; Theories of Deviance;* Volume 2: *Crime, Criminal Activity in Adulthood; Incarceration, Adulthood.*

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***Ross Macmillan***

## CRIME AND VICTIMIZATION, CHILDHOOD AND ADOLESCENCE

**SEE** Volume 1: *Child Abuse;* Volume 2: *Crime and Victimization, Adulthood; Domestic Violence.*

## CULTURAL CAPITAL

The noted French sociologist Pierre Bourdieu first developed the sociological concept of cultural capital (Bourdieu, 1977, 1984, 1986, 1996; Bourdieu & Passeron, 1990; Swartz, 1997). The concept, in its most simplistic form, encompasses the distinctive sets of social class-based cultural and behavioral attributes (e.g., disposition, style, worldview, knowledge), material possessions (e.g., music, art work), and institutional representations (e.g., educational degrees, honors, other credentials), which tend to distinguish individuals of dominant class (or middle-to-upper class) background from those of dominated (or lower class) backgrounds. At the heart of the concept of cultural capital is the more widely familiar notion of economic capital (i.e., money, property, business ownership, other assets). In industrialist and post-industrialist capitalist societies, economic capital is routinely exchanged for material possessions, services,

and property. In addition, individuals, and indeed, groups, have different levels of economic capital at their disposal in any given historical period. Differing levels of economic capital at the group level are often used to define distinct social classes. Bourdieu's concept of cultural capital, along with other forms of noneconomic capital (social and symbolic), extends the more fundamental notion of *capital* and *exchange* to other less readily recognizable areas of social relations and everyday life.

Bourdieu (1986) classified cultural capital into three broad types: (a) embodied forms—such as dispositions, tastes, aspirations, and knowledge; (b) objectified forms—such as the material objects representative of *high* culture; and (c) institutionalized forms—including formalized symbols recognizing competence or distinction (e.g., degrees, academic honors, memberships). Although cultural and economic capital are highly associated, cultural capital is a much more effective form of capital in legitimating existing social inequality, given that its possession is widely viewed in terms of competence rather than economic wealth. The possession of cultural capital is of great advantage to its holder because it facilitates continued accumulation—those with high levels tend to do well both educationally and professionally—and because increasing levels of cultural capital, exemplified by educational degrees and other formal credentials, can eventually be converted back into economic capital through occupational placement.

However, in Bourdieu's view, the particular sets of dispositions and symbolic possessions that, statistically speaking, distinguish middle and upper class people from those of lower and working class backgrounds are not inherently superior. Rather, their relative value (as capital) is arbitrary, and purely based on their association with social groups of high status and power within society. As such, the concept of cultural capital provides an explanation of the ways in which more subtle, symbolic *possessions*, less visible and recognized as economic capital, function as a form of capital, which can be exchanged for (or converted into) other forms of capital to maintain or elevate one's position in the social hierarchy.

Bourdieu's concept is contextually grounded within a larger theory of social reproduction; that is, a comprehensive model of how existing social inequalities are transmitted from one generation to the next. Integral to understanding the concept of cultural capital are Bourdieu's related concepts of habitus and field, which, respectively, help to explain the formation of cultural capital, and to contextualize its relative power. Habitus represents the internalization of the conditions associated with one's socioeconomic position in society; that is, it constitutes the mental constructs and behavioral inclinations that have developed across one's formative life experiences, shaped by one's position in the social hierarchy. As such, habitus represents the master patterns of dispositions, tastes, and perspectives, which have developed across time, shaped by one's cumulative experiences.

*Field*, for Bourdieu, represents the context in which individuals compete (although not necessarily consciously) for resources, power, and position within the social hierarchy. Features of habitus, depending on one's set of life experiences, can become cultural capital—in that they place the individual at a relative advantage—within specific fields of action. For Bourdieu, however, those in higher social positions are much more likely to be relatively advantaged across many different fields of competition, because they have been socialized into the dominant culture and therefore have a better understanding of the *rules of the game,* which have been shaped historically by dominant class interests.

## CULTURAL CAPITAL AND SOCIAL REPRODUCTION IN MODERN SOCIETY

In modern, developed societies, Bourdieu argues, cultural capital has come to play a pivotal role in reproducing social inequities, whereas in feudal societies, or even nondemocratic forms of capitalist society found in past centuries, economic capital, possessed by the few, was sufficient to control most, if not all, sectors of societal operations and social relations. Status ascription, the overt transmission of both economic capital and social status from one generation to the next, was an accepted fact, just as royalty is passed on from a king to his progeny. In modern meritocratic societies, however, although economic capital is still passed from one generation to the next, it is much less acceptable for children to simply inherit social status (e.g., occupational positions, political posts) from their parents. Because cultural/behavioral attributes tend to closely correspond to one's socio-economic position in society, individuals originating from higher social positions tend to value and recognize these same attributes—attributes more commonly exhibited within their higher status social surroundings—in others. As such, the possession of these symbolic attributes, when recognized by others in similarly high social positions, functions as a cue, of sorts, to signify one's *appropriateness* for group inclusion.

This *cultural* recognition, however, often occurs at a subconscious level and is usually interpreted (by the individuals, themselves) as competence, intelligence, language facility, and natural ability. This subconscious process of mutual recognition provides relatively continuous access to other forms of capital readily available within higher social strata. Moreover, the *culturally*

*specific* knowledge of the field of competition (i.e., the rules of the game), and associated level of comfort acting within this field, enables higher status individuals, who possess these attributes, to successfully navigate the field and access other forms of capital, whether cultural (e.g., a degree from a prestigious university), social (inclusion into powerful social networks), economic (high paying employment), or symbolic (general recognition of talent or competence). It is the possession and activation (Lareau & Horvat, 1999) of such attributes and field-specific knowledge that together constitute cultural capital.

With the expansion of the education sector across the past century in modern industrialist societies, schooling and educational credentialing have developed into an increasingly important and, theoretically, merit-based route to social mobility. Bourdieu argued that schools and educational institutions, more generally, now constitute a key field of play in which individuals, and groups, must vie to secure or elevate their social status. In Bourdieu's view, educational institutions, from preschool to postgraduate study, have been structured historically in close correspondence with existing social inequalities. Similarly, the orientations and expectations of teachers and administrators have been shaped by experiences tied to their own social class backgrounds—generally middle and upper middle class. As such, the subtle process of class-based cultural recognition (and lack of recognition) continuously occurs within schools and classrooms between teachers and students, administrators and parents.

Children from middle- and upper-class backgrounds, whose cultural dispositions and experience-based attributes tend to align closely with those of their teachers (i.e., children who possess cultural capital), are much more likely to experience success in school. Their levels of *requisite* knowledge and their behavioral patterns/styles, possessed by virtue of their out-of-school experiences (which are in turn shaped by their position in the social class hierarchy) are rewarded within schools in the form of good grades, positive praise, and heightened academic opportunities (e.g., college-level tracking, admission to more selective schools). Moreover, these cultural/behavioral attributes are legitimated by schools, because their educational success is *christened* as the logical consequence of hard work and/or natural ability.

In contrast, children from lower socioeconomic backgrounds, who have little access to *cultural capital*—because they have developed significantly different habitus across their lives than have their more middle- and-upper class peers—are therefore *disadvantaged* in school. They, unlike their more advantaged peers, do not share the class-based cultural dispositions of teachers and administrators, and therefore, are less likely to succeed in school. As such, they are compelled to operate within a *foreign* system, one that expects them to have already mastered certain linguistic and behavioral patterns and associated social and cognitive skills, which are, in turn, directly implicated in academic success. These students experience the *cultural* misalignment between home (social class) and school in the forms of academic failure, disciplinary action, and frustration. Schools, therefore, may inadvertently work to reproduce existing social inequities. This represents one possible explanation of why middle- and upper-class children are much more likely to successfully complete each stage of schooling (Gambetta, 1997), enter postsecondary institutions of learning and obtain degrees (Horvat, 2001), and secure better paid professional employment, thus maintaining their relatively advantaged position in society.

## CULTURAL CAPITAL'S TREATMENT IN RESEARCH

The concept of cultural capital offers a more nuanced understanding of the ways in which class-based inequalities are reproduced, at the level of the individual, from generation to generation in modern differentiated societies. Embedded within a class-based theoretical framework, it provides an alternative perspective on the subtle processes by which individuals, shaped by their class-specific environments, differentially interact with societal institutions in statistically predictable ways to reproduce their objective conditions of existence. However, since its initial conception and development, the concept of cultural capital has been interpreted and *operationalized* in manifold ways in social science research.

Unfortunately, the concept has often been defined for the purpose of measurement and hypothesis testing in ways that have not been faithful to Bourdieu's larger theoretical project (Lareau & Weininger, 2003). Quantitative studies, which have primarily used secondary survey–based data sets not designed specifically to measure the concept of cultural capital, have been able to only partially capture the concept's full meaning (for a complete review of this literature, see Lareau & Weininger, 2003). Most often, these studies, which primarily examine the impact of cultural capital on educational outcomes, define the concept in terms of leisure activities associated with *high brow* culture, such as interest in and/or visits to theaters and museums and knowledge about the classical arts (De Graaf, De Graaf, & Kraaykamp, 2000; DiMaggio, 1982; DiMaggio & Mohr, 1985; Kalmijn & Kraaykamp, 1996; Katsillis & Robinson, 1990). Some studies have extended the concept to more mundane activities, such as library visits, parent/child reading behaviors, and educational resources in the home (De Graaf, 1986; Kalmijn & Kraaykamp, 1996; Roscigno & Ainsworth-

Darnell, 1999; Sullivan, 2001). Some researchers have defined the concept in opposition to academic ability or technical skills (DiMaggio, 1982; DiMaggio & Mohr, 1985), whereas others have, to varying extents, incorporated such skill levels into the concept (Farkas, Grobe, Sheehan, & Shuan, 1990; Sullivan, 2001).

The results of such studies have tended to support the relationship between cultural capital and educational achievement and attainment, although the size (or meaningfulness) of these relationships has been questioned (Kingston, 2002). However, the possession of cultural capital, so defined, has not always been as tightly linked with social class as Bourdieu's theory of social reproduction would predict. In fact, some researchers have found that within the educational context, the possession of cultural capital tends to yield greater benefits to individuals from lower socioeconomic backgrounds than to those in higher social class positions (Aschaffenburg & Maas, 1997; DiMaggio, 1982; Kalmijn & Kraaykamp, 1996). That is, the possession of cultural capital may provide people from lower class backgrounds with the means to attain *social mobility* through schooling (DiMaggio, 1982). Those richer in economic capital may have less need of cultural capital (and the academic success that it brings) to retain their social position into adulthood.

Qualitative studies of cultural capital have proved a bit more enlightening than survey-based research, because they have focused on discovering the processes by which parents interact with children and schools, charting the variety of ways in which class-based differences in knowledge, styles, and comfort level influence both family-to-school relationships and child development (Lareau, 2000, 2003; Lareau & Horvat, 1999). These studies have contributed to the further development of the concept by providing more concrete examples of actual class-based differences in practices and dispositions (i.e., manifestations of habitus) at the ground level within specific contexts. However, qualitative work, arguably, has not been able to increase the operational clarity of the concept, nor has it improved its measurability. As a result, the concept remains largely abstract and subject to different interpretations.

**Limitations of the Concept** Most research on cultural capital that has been produced to date, including that of Bourdieu himself, has neglected to examine the ways in which cultural capital is acquired by some proportion of the lower class (Carter, 2003). The concept, therefore, has not been able to explain how some people from socially disadvantaged backgrounds are able to succeed in school and take advantage of educational opportunities to improve their social status as adults. Bourdieu was specific in defining cultural capital, and the habitus that it engenders, in terms of statistical occurrences, a clear acknowledgement that some variation in the possession of cultural capital does exist between individuals within, as well as between, social class positions. However, no clear explanation exists for how this occurs, especially with regard to variation in cultural capital evident within lower and working class strata. If cultural capital accrues in relation to one's objective, class-based living conditions, then how do some people from socially disadvantaged positions develop the requisite cultural/behavioral attributes to succeed in school and to achieve social mobility? Have they simply been able to supersede the effects of the objective conditions in which they were socialized, and if so, how? Have they learned the cultural dispositions in school, which according to Bourdieu's theory, expects but does not explicitly teach these dispositions? These theoretical problems continue to challenge the conceptualization and use of cultural capital in the research.

## FUTURE DIRECTIONS

The concept of cultural capital continues to provide a rich foundation for research into the widely documented statistical association between social class background and educational attainment. Future research will need to further explore the ways in which families advantage their children in educational and other contexts; the degree to which differences in practices, expectations, and aspirations are based in social class positioning; and how institutions respond to such differences. Moreover, as Bourdieu's overall theoretical project features the school so prominently in the intergenerational transmission of social status, it is essential that more research be conducted within schools and classrooms to examine the extent to which teachers implicitly recognize and reward existing stores of cultural capital as academic competence in students from more advantaged backgrounds. Studies will need to carefully examine the practices of schools and teachers to distinguish between the explicit instruction of skills and implicit expectations of personal styles and habits. Finally, more research will need to focus on differences in educational and occupational choices made by youth at key institutional junctures to determine the degree to which such choices are made with conscious and strategic intent (as in a rational choice model) or are reflections of more subtle and generalized class-based dispositions derived from the subconscious schema of what constitutes one's appropriate place in the social structure.

SEE ALSO Volume 1: *Coleman, James; Human Capital; Intergenerational Closure; Racial Inequality in Education; School Culture; Social Capital; Socioeconomic Inequality in Education.*

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## CULTURAL IMAGES, CHILDHOOD AND ADOLESCENCE

Childhood is a key stage in the life course, and cultural and historical approaches to childhood have moved in two somewhat contradictory directions. One approach has focused on children's lived experience—on children's voices, perceptions, behavior, and experiences. This line of investigation has focused on the highly specific circumstances in which children have grown up, emphasizing differences rooted in class, ethnicity, gender, geographical region, and historical era. This approach treats children as agents who play an active role in their own social, cognitive, physical, and moral development, constructing their own cultural and social identities, and reshaping cultural sensibilities.

The other approach, derived largely from cultural studies, focuses on childhood as a cultural category that reflects adult nostalgia, anxieties, expectations, and desires, and that is imposed on children. This approach, which is less concerned with the lived experience of individual children than with cultural symbolism and representation, examines the symbolic and psychological meanings that adults attach to the child. This cultural approach explores the shifting divide between adults and children, the representation of childhood in literary and visual culture and social and political discourse, and how artists, educators, psychologists, physicians, and poets have played a crucial role in defining childhood, in essentialist terms, as a sacred, symbolic category, defined in opposition to adulthood yet embodying adult preoccupations with asexual innocence, vulnerability, and spontaneity.

Ambivalence has characterized cultural images of childhood. This life stage has often been viewed positively, as a time of innocence, freedom, creativity, and imagination; as such, it has offered a critical vantage

point for apprising the pretensions, blindnesses, and weaknesses of adults. But images of childhood also contained explicitly or implicitly negative elements. Children have been regarded as naïve, incompetent, irrational, emotional, dependent, and vulnerable. Children, from this perspective, required protection and sheltering from the adult world, and growing up could be seen in negative terms, as corruption. Bad children could easily be regarded not simply as naughty or mischievous but as precociously or inherently wicked, or even demonic.

Superficially, it would seem that these two approaches could scarcely be more divergent, with one approach dealing with "real" children and the other with adult representations and conceptions of childhood. However, the two approaches are only superficially contradictory. Cultural conceptions of childhood, age, and gender inevitably color observations of children's behavior and shape the institutions and practices that structure children's lives.

In the 17th-century American colonies, childhood was generally regarded as a life stage that should be passed through as quickly as possible. The New England Puritans regarded children as sinful, even bestial creatures, reflecting a religious belief in original sin and humanity's innate depravity. As the Reverend Cotton Mather put it: "Are they Young? Yet the Devil has been with them already. . . . They go astray as soon as they are born. They no sooner step than they stray, they no sooner lisp than they ly." The Puritans regarded crawling as animal-like, toys as devilish, and play as lacking in value. In fact, however, the Puritans were obsessed with children, regarding the young as a trust from God and the key to creating a godly society. The Puritan emphasis on education reflected this preoccupation with childhood.

By the time of the American Revolution in the late 18th century, a new conception of childhood was arising. Urban, middle-class parents began to regard their offspring as innocent, malleable, and fragile creatures who needed to be sheltered from the adult world. These parents kept their children at home much longer than in the past. Instead of putting them out to work, they put them in school instead. Childhood, according to this view, was the opposite of adulthood. At a time when the preindustrial social order was breaking down, and increasingly commercial and urban patterns of life were appearing, children were an important symbol; they were regarded as asexual and pure and were associated with nature and organic wholeness.

It is important to note, however, that at the same time that urban, middle-class parents romanticized their children as little angels, working-class and farm children became more valuable economically than ever before. Although reformers (later known as "child-savers") romanticized the bootblacks, newsboys, match girls, and "street Arabs" found on urban streets, there was a tendency to sharply differentiate between the innocence of middle-class children and the precocity and incipient corruption of these street children (who were part of what was called "the dangerous classes").

Toward the end of the 19th century, new images of childhood appeared. The emerging popular culture industry—literature, photography, and the movies—played a particularly important role in disseminating images of heartwarming infants, wide-eyed waifs hungering for a home, curly-haired cherubs, and savvy street urchins. Among images of girlhood, there was an assortment of Cinderellas, Pollyannas, princesses, tomboys, bobby-soxers, and, later in time, prepubescent Lolitas. Among images of boyhood were mischievous scamps, rambunctious ragamuffins, little rascals, angry and alienated adolescents, and, more recently, a parade of pranksters, burnouts, stoners, and homeboys.

These images, in turn, reflected shifts in public anxieties, aspirations, fears, and fantasies. At the beginning of the 20th century, the Victorian image of the child as a little angel gave way to a new ideal. The new standard was spunky, sassy, naughty, and cute, a response to public worries that boyhood, in particular, was becoming too constrained and female-dominated. The earliest comics promote the image of the adorably willful child. First came the Yellow Kid, among the first American comic strip characters and the prototype for Dennis the Menace, Bart Simpson, and other gap-toothed rascals and troublemakers. Then came Buster Brown, the little rich kid with a blond pageboy haircut who was always getting into mischief, but a milder brand than the Yellow Kid. Mary Pickford, the movies' first influential screen child (despite the fact that she was an adult), embodied the new ideal of childhood. She was naughty and coquettish but also innocent and sweet. She was followed by the first true child star, 6-year-old Jackie Coogan, who reinforced the image of the ideal child as rambunctious, excitable, and energetic.

These positive images of childhood contributed to making the early 20th century a period of reform. Child-savers embarked on a crusade to universalize a middle-class notion of childhood, by launching "pure milk" campaigns, enacting compulsory school attendance laws, establishing "mothers' pensions" that allowed single mothers to keep their children at home (rather than institutionalizing them), and restricting and ultimately outlawing child labor.

The Great Depression brought many new images of childhood. The Depression sparked fears of a lost generation of children, who might fall into crime and be susceptible to demagogues. One popular Depression-era

image of childhood was of "angels with dirty faces." These included the Little Rascals and the Dead End Kids, the urban offspring of Tom Sawyer and Huck Finn.

It was during the Depression that Walt Disney became synonymous with children's movies and his films developed their trademark traits. The Disney studio self-consciously reworked fairy tales, myths, and classic children's stories, erasing elements that it considered inappropriate for kids and making the stories more didactic and moralistic. Thus, for Pinocchio (1940) to become a real boy, he must prove himself "brave, truthful, and unselfish." *Snow White and the Seven Dwarfs* (1937) emphasized proper gender behavior. Foreshadowing later Disney films, the heroine finds fulfillment in housework and makes marriage her life's ultimate goal.

The most popular child star of the 1930s was Shirley Temple, who topped the box office every year from 1935 to 1938. She was America's little darling, tap-dancing and singing through the Depression in 50 short films and features by the time she was 18. Part of her attraction was her cuteness, charm, dimpled cheeks, and bouncing curls. During a time when the nation's self-confidence had been battered, she provided reassurance. She was adults' ideal girl—independent, even-tempered, flirtatious, and infectiously optimistic. She was undeniably talented: She could sing, dance, act, and melt the heart of the grouchiest sourpuss. Escapist fantasy, too, was part of her appeal. Lacking a mother in almost all of her movies, she was free from domestic constraints. But her appeal went beyond escapism. In many films, she served as a "spiritual healer" who resolved family disputes, bridged class differences, and restored adults' confidence in themselves. Oblivious to class and racial differences, she moved easily between poor and wealthy homes without ever being greedy or envious.

At the end of the decade, a new cinematic stereotype appeared, supplanting even Shirley Temple in popularity. This was the all-American teen, personified by Mickey Rooney and Judy Garland in the Andy Hardy movies, which focused on middle-class teenagers' crushes, infatuations, and humorous and embarrassing mishaps. Such "Kleen Teens" as Deanna Durbin, Roddy McDowell, Dickie Moore, Lana Turner, and Jane Withers provided the caricature that the troubled, misunderstood, and alienated teen characters of 1950s films rebelled against.

During World War II, a highly sentimental view of childhood appeared on the screen, one that bore little resemblance to children's actual wartime experiences. A deeply romanticized view of childhood was apparent in movies such as *National Velvet* (1944), *A Tree Grows in Brooklyn* (1945), and, shortly after the war, *Miracle on 34th Street* (1947).

The 1950s marked the beginning of the end of innocence. Before World War II, the mystery and otherness of childhood had been rarely depicted in popular culture, but the mounting influence of popularized versions of Freudianism resulted in new images of children. Beginning in the 1950s, movie-goers saw depraved children, anticipated in *Mildred Pierce* in 1945, then realized in *The Bad Seed* (1956) and such later films as *Children of the Damned* (1963) and *The Exorcist* (1973). In the 1970s, children were depicted as precocious, miniature adults, as in *Harold and Maude* (1971), and as emotional footballs, such as in *Kramer v. Kramer* (1979). Another key theme was the death of childhood innocence, seen in Martin Scorsese's *Taxi Driver* (1976) and Louis Malle's *Pretty Baby* (1978). Few American films before the 1960s explored children's psychological life or tried to see the world through children's eyes; but many, like the Our Gang comedies and Walt Disney cartoons, tried to depict the world of a child's imagination.

During the 1950s, amused condescension gave way to concern and bewilderment. No longer were portraits of children exclusively images of wholesome naughtiness, mooning boys, and puppy love. Kids increasingly became a vehicle for exploring the confusions of modern society. The cute child was replaced by the evil child, such as Rhoda Penmark, the 8-year-old pigtailed murderer in *The Bad Seed* (1956). The movies also brought to the screen rebellious and alienated adolescents, as well as the world of leather-clad juvenile delinquents, switchblades, and drag racing.

During the 1960s, there were attempts to recapture an image of childhood innocence, evident in such movies as *Mary Poppins* (1964), *Chitty Chitty Bang Bang* (1968), *The Sound of Music* (1965), *40 Pounds of Trouble* (1962), and *Oliver!* (1968). But there were also more psychologically nuanced portraits of childhood. *To Kill a Mockingbird* (1962) viewed racism through the eyes of a child. *The Effects of Gamma Rays on Man-in-the-Moon Marigolds* (1972) portrayed the psychological and emotional abuse of a child.

During the 1950s and 1960s, specific genres of movies were, for the first time, marketed directly to the young, including science fiction films, motorcycle and juvenile delinquent movies, and beach blanket and surfer films, reflecting the large cohort of Baby Boomers who were born between 1945 and 1964. After 1970 the targeting of children and adolescents became much more intensive and self-conscious. One recurrent formula involved a teenage outcast, mocked by her popular, style-setting classmates, who has a makeover and ends up going to the high-school prom with the handsomest boy on the football squad. Yet especially striking were deeply disturbing images of youthful depravity. The

movies portrayed kids as demons in such films as *Carrie* (1976) and *The Exorcist* (1973), as prostitutes in *Pretty Baby* (1978) and *Taxi Driver* (1976), and as incipient murderers in *Basketball Diaries* (1995). Portraits of indifferent, uninvolved, unobservant, and uncomprehending teachers and clueless, disconnected, self-deceived, and self-absorbed parents became much more common. The impact of family breakdown and disconnection was a particularly popular theme, apparent in movies as diverse as *WarGames* (1983), *ET: The Extra Terrestrial* (1982), and the *Home Alone* films.

A number of the most memorable recent American films dealing with childhood paint particularly unsettling portraits of the psyche and culture of the young. There was *River's Edge* (1986), based on the true story, which looks at how a group of working-class northern California teens responds after one of the boys murders his girlfriend. It paints a picture of emotionally numbed kids disconnected from the adults around them. Others were *Thirteen* (2003), which shows an adolescent world of body piercing, self-mutilation, tattoos, sexually provocative clothing, underage sex, and casual drug use, and the Columbine-inspired *Elephant* (2003), which portrays high schools as a brutal Darwinian world of cliques, taunting, and tormenting, culminating in violence.

These highly negative representations of childhood reflected, and perhaps reinforced, the tendency at the end of the 20th century to treat children, especially delinquent children, in more controlling ways. The trend toward trying juvenile offenders in adult courts, the increase in testing in school, and the adoption of school dress codes and zero-tolerance discipline policies reflected a view of the young as a "tribe apart" and a declining tolerance for certain kinds of "childish" behavior that had been celebrated in popular culture a century earlier.

**SEE ALSO** Volume 1: *Consumption, Childhood and Adolescence; Media and Technology Use, Childhood and Adolescence;* Volume 2: *Cultural Images, Adulthood;* Volume 3: *Cultural Images, Later Life.*

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# D

## DATA SOURCES, CHILDHOOD AND ADOLESCENCE

*This entry contains the following:*

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*Robert Crosnoe*

IX. STANFORD-TERMAN STUDY
*Robert Crosnoe*

### I. GENERAL ISSUES

Longitudinal studies follow the same group of people across multiple points in time. Over the last century, social scientists have conducted thousands of longitudinal studies. These studies, which serve as the lifeblood of life course research, are quite diverse in design, execution, focus, and purpose, as evidenced in the list below:

- Some studies are short term, lasting weeks or months, whereas others span years or even decades.
- Some studies are sponsored by the government for public use, whereas others are private enterprises.
- Some studies rely on surveys and require various kinds of statistical analysis, whereas others rely on ethnography and require qualitative analysis.
- Some studies focus on the individual's own characteristics, whereas others focus on the individual's relationships and social settings.
- Some studies are representative of the nation or some other well-defined population, whereas others were created with less systematic sampling frames.

Together, these diverse kinds of longitudinal studies have been used to construct the broad literature on the life course that is reviewed in this encyclopedia. This section focuses on longitudinal studies examining the early stages of the life course: childhood, adolescence, and young adulthood. A complete review of such studies would fill volumes, so a small sample of important, influential studies was selected because, first and foremost, they have been critical resources for life course researchers but also because they represent the great diversity in methods, approaches, and organization in longitudinal research described above.

These studies do more than investigate young people over time. Of equal importance, they all target the main

concepts of life course research, including trajectories, transitions, timing, and context.

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## II. BALTIMORE STUDY

Most major longitudinal studies of the life course have been either nationally representative or focused on middle-class, white samples. The Baltimore Study, however, offered a window into how life unfolds for young people growing up under disadvantaged circumstances. This distinct focus reflects the study's origins as an evaluation of a prenatal service program for pregnant teenagers.

Funded by a consortium of private foundations as well as by the U.S. Department of Health and Human Services, the Baltimore Study began in 1966 with a sample of 399 pregnant adolescents in obstetric care at a hospital with a high rate of teen births in Baltimore. The majority of these young women entered a comprehensive prenatal and postpartum program aimed at improving the health of children and promoting the life prospects of mothers, with the larger goal of breaking the intergenerational cycle of poverty. A minority of the young women were randomly assigned to the regular hospital program.

Study personnel reviewed medical records and interviewed the mothers and their parents at various intervals. In 1972, the young mothers were systematically compared to classmates who had delayed becoming mothers themselves. The mothers and their children were reinterviewed in 1983. At this point, life history calendars were also completed dating back to the time of the focal child's birth. Mothers, children, and then grandchildren were followed up again in 1987 and 1995 (when the children of the original study were in their mid-20s), with life history calendars again completed.

The sociologist Frank Furstenberg (b. 1940) and his research collaborators have produced a series of books and articles documenting the experiences of the young mothers in the Baltimore Study. His 1976 book, for example, explained how these young women had become mothers at such an early age—largely through accidental rather than motivational means—and how their transition into motherhood had disrupted their lives, although some were able to return to school after having their children and, consequently, proved to be more resilient in the long run. A 1987 book, written with Jeanne Brooks-Gunn and Philip Morgan, took advantage of the two-decade follow-ups to examine how young mothers' lives and careers had shaped their children's development. For the most part, the children of the young Baltimore mothers had many problems as they grew up. These poor outcomes resulted from a combination of adverse circumstances (e.g., economic stress and family instability) with the timing of such events in children's lives. In other words, not only did they experience hardship, they experienced hardship at particularly vulnerable times in their lives.

The Baltimore Study provides a glimpse into the mechanics of the life course and the links between the life courses of family members (e.g., the linked lives concept in life course theory). Because of its focus on a portion of the American population that was historically overlooked by sociologists, the study's findings are particularly relevant to research in the social sciences.

More information about access to the Baltimore Study can be found on the Web site supported by the Department of Sociology Population Studies Center at the University of Pennsylvania. The original sample included 399 women, and the timeframe of the study is from 1966 through 1995.

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## III. BENNINGTON WOMEN'S STUDY

From 1935 to 1939, social psychologist Theodore Newcomb (1903–1984) examined the political attitudes and experiences of the student body of Bennington, a private women's college in New Hampshire. The study is widely regarded as a classic.

Although Bennington was a historically liberal environment, its expensive tuition meant that, during the Great Depression (1929–1939), most of its students came

from economically advantaged families that were also politically conservative. This mismatch between the sending families and the receiving college made for an interesting dynamic that has great relevance to life course research. In short, young women tended to enter Bennington with politically conservative views, but would often graduate from Bennington 4 years later with liberal views. For example, each class became progressively more liberal in voting patterns than the one below it (Newcomb, 1943). Moreover, follow-up interviews conducted decades later revealed that this liberalism had endured, with the vast majority of the Bennington alumni voting Democratic and participating in progressive political activities in the 1980s (Alwin, Cohen, & Newcomb, 1991).

Why and how did this happen? At Bennington, the faculty members tended to be liberal, as did many popular students. Liberalism, therefore, had high status. In a new, potentially frightening environment far from home, the young women starting college tended to adopt the prevailing norms and attitudes of the campus culture. This strategy, conscious or not, was self-protective. It helped them adjust and fit in. Yet as they became more immersed in campus life, they began to internalize the Bennington worldview, becoming true believers so to speak. Furthermore, after they left the Bennington campus, the views that they had developed there selected them into marriages, communities, and careers that reinforced their liberalism. In other words, they moved in liberal circles and married liberal men, which further supported their political worldviews. This phenomenon illustrates a key idea of life course research: Life experiences can accumulate in a self-propagating way.

The basic phenomenon documented by the Bennington study still resonates with views about the college experience in the early 21st century. More generally, the lives of the Bennington women demonstrate how experiences at one stage of life set the stage for experiences at subsequent stages of life in self-fulfilling ways.

The Bennington Women's Study is not publicly available at this time. The original sample included 527 women. The time frame of the original study was 1935 to 1939 with follow-up studies in 1960 and 1984.

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## IV. BERKELEY GUIDANCE STUDY AND THE OAKLAND GROWTH STUDY

The Berkeley Guidance Study and the Oakland Growth Study—following cohorts of young people born between 1920 and 1921 and 1928 and 1929 respectively—were conducted separately but are often grouped together. Both began around the Great Depression (1929–1939) era at the Institute of Human Development at the University of California at Berkeley, and, together, they have been seminal to the development of the life course paradigm.

The Oakland Growth Study was launched in 1932 under the direction of Harold Jones (1894–1960) and Herbert Stolz (1886–1971). In its original incarnation, it ran until 1939. Designed to study patterns of normal physical, emotional, and social development, it followed a group of 167 fifth and sixth graders living in Oakland, California, as they grew into teenagers. Multiple follow-ups were conducted decades later, spanning five intervals through 1981. Perhaps the most famous work associated with the Oakland Growth Study is the book *Children of the Great Depression* by Glen Elder Jr., which was first published in 1974. Focusing on the historical era in which the data were collected, Elder demonstrated how children adapted to the dramatic economic changes of their lives. As expected, he found that they had been deeply affected by their experiences during this period, with many of their troubles resulting from disruption to relationships within their families. Yet the overarching conclusion of this book stressed the resilience of the Oakland children.

The Berkeley Guidance Study began in 1928 under the direction of Jean MacFarlane (1894–1989), who enrolled 248 infants born in Berkeley, California, during 1928 and 1929. The study ran through World War II (1939–1945), with two additional data collections in 1959 and 1969. Again, Elder exploited the longitudinal and historical nature of the data to craft the basic principles of his life course approach. A series of articles he wrote with Avshalom Caspi and Daryl Bem (1988) on the long-term consequences of being shy or explosive during childhood is a good example. The team reported that shy boys faced delayed transitions into marriage and parenthood when they became adults and that, in the long run, they had lower occupational attainment than other boys. Another finding from this research was that explosive boys faced downward socioeconomic mobility relative to their peers and had higher rates of divorce when they grew up. In both cases, a personality characteristic selected young people into settings that reinforced their original dispositions. As demonstrated by the Bennington Women's Study, which was conducted between 1935 and 1939, life pathways took on a highly cumulative form.

A 1993 book by the sociologist John Clausen (1914–1996), *American Lives*, detailed how the original Oakland and Berkeley study members turned out and articulated the concept of planful competence (e.g., human agency) to explain who met with success in work and family and who did not. The theme of all of these works emanating from the Berkeley and Oakland studies is that lives are lived the long way and need to be studied as such.

These two studies are not publicly available at this time. The original Oakland sample included 167 school-aged children, with a timeframe of 1939 through 1981. The original Berkeley sample included 248 school-aged children, with a timeframe of 1928 through 1969.

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## V. EARLY CHILDHOOD LONGITUDINAL STUDIES

The adolescent-focused data sets collected by the National Center for Education Statistics (NCES) reveal just how much inequality was set before secondary school began. The Early Childhood Longitudinal Studies (ECLS) were designed to identify the origins of such inequalities. These studies follow two cohorts.

The Kindergarten Cohort (ECLS-K) is a nationally representative sample of 22,782 American kindergartners in more than 1,000 programs. The first data collection occurred in the fall of 1998, when the children were just beginning kindergarten. They were given diagnostic tests in several arenas (e.g., oral language skills, math knowledge, and so forth), and their parents, teachers, and school administrators were interviewed. This protocol was repeated in the spring of their kindergarten year. A 25% random subsample was followed up in the fall of first grade, primarily to better understand the role of summer break in achievement disparities, and then the full sample was followed up in the spring of 2000 (the end of first grade for most of the original sample children), 2002 (end of the third grade), and 2004 (end of the fifth grade).

The Birth Cohort (ECLS-B) is a nationally representative sample of 14,000 infants born in 2001. Data collection began when they were 9 months old. The primary form of data collection was a parent interview, but children also were assessed by study personnel at home (e.g., evaluation of cognitive skills and physical measurements). This protocol was repeated when the children were 2 years old and then when they were preschool age in 2005. At the 2005 data collection, the children's child-care providers and preschool teachers were interviewed. In the fall of 2006, when the majority of children entered kindergarten, they were again followed up, with their teachers also interviewed. The remainder of the sample was followed up when they entered kindergarten the following year (2007).

ECLS-K allows the study of school readiness—who enters the formal educational system with the most developed academic and academic-related skills—and its consequences for early learning and achievement. ECLS-B came after ECLS-K, but it allows for inquiries into why the differences in school readiness documented in ECLS-K came to be. Because of their nationally representative samples and large numbers of low-income, racial minority, and immigrant children, the ECLS studies are well-positioned to study inequality.

The ECLS data sets are relatively new and, as such, have not produced as many studies as the other NCES data sets. What has come out so far, however, has been informative. One of the first monographs based on ECLS-K, by Valerie Lee and David Burkham in 2002, documented just how much inequality existed among different race and ethnic groups and different social classes at the very beginning of formal schooling. This "inequality at the starting gate" is a bellwether for future inequalities across the life course, primarily because the educational system is so cumulative and because subgroup differences in educational attainment powerfully predicts subgroup differences in occupational attainment, earnings, family formation, and health throughout adulthood. Thus, ECLS-K targets one of the first major life course transitions—the transition from the private world of the family to the public world of the school—that helps to establish life trajectories for individual children as well as differences in these trajectories across various segments of the American population. Although still in their beginning stages, the ECLS data sets have great potential to influence life course research because they provide a national picture of the stages of life that precede the stages captured by most national studies, such as the National Educational Longitudinal Study (NELS), the National Longitudinal Study of Adolescent Health (Add Health), and the National Longitudinal Survey of Youth (NLSY).

The ECLS data sets are publicly available through the National Center for Education Statistics. More information about access can be found on the Web site

supported by the Institute of Education Sciences. The original ECLS-K sample included 22,782 kindergartners, and the timeframe of the study is currently from 1998 through 2004 (with future data collections planned). The original ECLS-B sample included 14,000 infants, and the timeframe of the study is currently from 2001 through 2007 (with future data collections planned).

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## VI. NATIONAL EDUCATIONAL LONGITUDINAL STUDY

Like the pioneering High School and Beyond study (HS&B), the National Educational Longitudinal Study (NELS) was designed by the National Center for Education Statistics (NCES) for research on the link between school contexts and educational pathways. NELS had the added mission of providing better information on the link between home and school. NELS is valuable to life course research because it allows the examination of schooling experiences that set the stage for the rest of life in connection to the family and school contexts that are major settings of early life.

NELS began in 1988 with a nationally representative sample of 24,599 eighth graders enrolled in 1,052 schools across the United States. After the base year data collection, which included interviews with students, parents, teachers, and school administrators, follow-up interviews were conducted in 1990, 1992, 1994, and 2000. Parents were reinterviewed in 1992, and teachers and school administrators were interviewed at all time points through 1992. High school and college transcripts were also collected during the 1990s. It is important to note that efforts were made to follow dropouts as well as those who remained in school, and that some young people were added to the sample after 1988 in order to maintain the representativeness of the sample as a whole. The student is the unit of the analysis, but data were collected from multiple actors in the students' lives as they transitioned through, and then out of (by graduating or dropping out), the educational system and higher education.

As already mentioned, NELS is especially rich in relation to home-school connections and other forms of social capital. James Coleman and Barbara Schneider (1993) provide examples, using NELS, of how parents can work the system for their children and of how schools can thwart or facilitate the educational participation of parents. Such information has shed valuable light on the persistence of socioeconomic and racial disparities in academic achievement and educational attainment. Other major topics relevant to the life course that are often studied with NELS include pathways to dropping out and the disruptiveness of school transitions.

For example, Robert Croninger and Valerie Lee (2001) reported that teachers—another important source of social capital—were protective factors in the lives of young people most at risk for dropping out because of their family or academic circumstances. This form of linked lives—a student connected to a teacher by virtue of classroom assignment—proved to be a turning point for many young people on a clear trajectory toward dropping out from school. As another example, Kathryn Schiller's 1999 study documented that transitioning from middle school to high school often leads to declining rates of academic achievement because of disrupted social relations. Yet young people who performed poorly academically in middle school tended to increase their achievement when only a small portion of their middle school peers made the transition to high school with them. In other words, some students are better able to start fresh when they attend a different school than most of their middle school peers. A transition that is often seen as problematic, therefore, could be positive depending on the context in which it occurred.

NELS provides data that can be used to construct academic histories across different family and institutional contexts. Moreover, its time frame allows researchers to understand how these histories forecast adult experiences. In this way, NELS allows researchers to take a life course perspective on education.

The NELS data set is publicly available through the National Center for Education Statistics. More information about access can be found on the Web site supported by the Institute of Education Sciences. The original sample included 24,599 eighth graders, and the timeframe of the study is from 1988 through 2000.

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## VII. NATIONAL LONGITUDINAL STUDY OF ADOLESCENT HEALTH

Add Health is the moniker for this large, ongoing study of adolescents in the United States. Sponsored by the National Institute of Child Health and Human Development and other funding agencies and operated out of the Carolina Population Center in Chapel Hill, North Carolina, Add Health is a nationally representative sample of seventh to twelfth graders during the 1994 and 1995 school year. Its original purpose was to provide information on the social contexts of the health and health behaviors of the American youth.

Add Health began with a census-like survey of more than 90,000 students in its 132 focal middle schools and high schools. From there, a representative sample of 20,745 students was selected across schools for the primary data collection. Wave I, in which adolescents were interviewed at home, occurred in 1995. The adolescent interviews were supplemented with parent interviews, school administrator interviews, and census information on neighborhoods. Wave II followed up the Wave I youth, except seniors, in 1996. Wave III followed up the Wave I youth, including seniors, in 2001. Wave IV is currently under way, with most sample members being in their late 20s. Add Health has several special features, including a sibling subsample and biomarker data that allow for genetic inquiries, a network component in which friendship patterns within schools are mapped out, a partner module in which romantic partners were identified and in some cases interviewed, and an education component that includes extensive academic information from high school transcripts.

Add Health has provided insight into major adolescent health issues, including obesity, depression, suicide, substance use, and, in particular, sexual activity. Many studies have linked together these various aspects of health, with Stephen Russell's and Kara Joyner's (2001) studies of the mental health and health behaviors of gay and lesbian youth being a widely cited example. Yet the influence of Add Health extends beyond health. The peer networks data have been especially informative. For example, Dana Haynie (2001) demonstrated that the well-documented influences of friends on adolescents' engagement in risky behavior was in fact largely conditional on the position of the adolescents and their friends in larger networks of social relations in their schools. As another example, James Moody (2001) demonstrated that many racially integrated schools in the Add Health sample were in fact largely segregated by race in terms of everyday social interaction.

Add Health is a resource for understanding many aspects of adolescence. Because the sample has been followed over time, these adolescent experiences can be linked to young adult outcomes, facilitating understanding of continuity and change across the life course. Moreover, its ability to link biological and social data puts it at the vanguard of new movements to understand the interplay of genes and the environment in the life course.

The Add Health data set is publicly available through the Carolina Population Center. More information about access can be found at the Carolina Population Center Web site supporting the study. The original core sample included 20,745 adolescents, and the timeframe of the study is currently from 1994 through 2002 (with future data collections planned).

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## VIII. NATIONAL LONGITUDINAL SURVEY OF YOUTH

The National Longitudinal Survey of Youth (NLSY) refers to a collection of studies overseen by the Bureau of Labor Statistics as part of an umbrella program of

national longitudinal studies on the life events of Americans. Two iterations of NLSY have been particularly useful to researchers interested in adolescence as the foundation for later stages of the life course.

NLSY79 began in 1979 with a sample of 12,686 young people who had been born in the late 1950s and early 1960s. This sample included an over-sample of African-American, Hispanic, and economically disadvantaged youths as well as a subsample of youth who had enlisted in the armed forces by 1978. A mixture of personal interviews and telephone interviews, NLSY79 ran annually through 1994 and then biennially up through 2008. It also included some additional data collection components, including surveys of schools and the collection of high school transcripts. Primary subject areas include labor market experiences, education, military experience, health, behavior, and family life. Beginning in 1986, the children of the NLSY79 sample members also were included in the data collection.

NLSY97 was similar in form and function to its predecessor, but focuses on young people in a different era and birth cohort. Its purpose was to gauge the transition between adolescence and adulthood, specifically how young people move from school into work and family life. It began in 1997 with a sample of 8,984 youths born between 1980 and 1984. Like NLSY79, it over-sampled the African-American and Hispanic youth and runs annually, with a parent interview in 1997 and a school supplement including surveys of school administrators and the collection of high school transcripts. NLSY97 covers many of the main subject areas as NLSY79, including labor market experiences, education, and family formation, and it also catalogs major event histories.

Several widely cited studies demonstrate the value of the various NLSY data sets to life course research. First, Daniel Lichter and colleagues (1992) used the NLSY79 survey data to construct relationship histories for young women, and then linked the data with the U.S. census to identify sex ratios in their local areas. They reported that socioeconomic attainment improved women's chances of marrying. Moreover, they were able to conclude that the quantity of *marriageable* (i.e., employed and financially stable) men in the area predicted their odds of getting married and trumped other important factors (e.g., welfare history, family background) in explaining why African-American women were less likely to marry than young white women. In other words, a key relationship pathway in the life course was dependent on larger social and economic contexts that shaped interactions among people.

Second, Richard Strauss's and Harold Pollack's 2001 study used the children of the NLSY79 respondents to track trends in obesity over the 1980s and 1990s. Their results detailed the dramatic increase in obesity among young people during this period, providing sound documentation of the obesity epidemic that had generated so much coverage in the national media. Yet, more than just establishing a basic population health trend, these data provide a historical and cultural context for understanding the role of obesity in the early life course. Third, the NLSY has been used extensively by criminologists. Its long-term frame and focus on the transition between adolescence and adulthood has been especially useful for establishing patterns of entry into and desistance from crime behavior across different stages of life and how these patterns are related to life course transitions and social relationships.

The guiding purpose of the NLSY, in all of its incarnations, has been to understand the kinds of adults that young people turn out to be. This purpose positions the NLSY as a pre-eminent tool for studying, on a national scale, the early stages of life within a life course framework.

The NLSY data set is publicly available through the Bureau of Labor Statistics. More information about access can be found at the Web site supported by the U.S. Department of Labor, Bureau of Labor Statistics. The original NLSY79 sample included 12,686 youth. It began in 1979 and is ongoing. The original NLSY97 sample included of 8,984 youth. It began in 1997 and is ongoing.

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## IX. STANFORD-TERMAN STUDY

Begun in 1922, the Stanford-Terman Study is the longest-running longitudinal study of Americans. The study was created by Lewis Terman (1877–1956), a psychologist at Stanford University, to determine the kinds of adults that

bright children became. A sample of 857 male and 671 female children in California schools who scored in the gifted range on the Stanford-Binet IQ test was assembled. The sample members (referred to as *Termites*) ranged from young children to teenagers and generally came from White middle-class homes. They took diagnostic tests, and they and their parents were interviewed.

After the initial data collection, the original sample members were followed up in fairly regular intervals through 1992. Because of budget constraints, the primary means of data collection was a mail-in questionnaire, but other forms of data were collected in less systematic fashion over the years, including press clippings, written responses to open-ended questions about family and work, and notes and letters from the Termites to Terman and his successors. In the 1980s, the sociologist Glen Elder Jr., and his research assistants (1993) developed codebooks for military service and health for this archived supplemental material. The resulting codes were coupled with the questionnaire data to create life record files for the Stanford-Terman subjects.

As expected, based on their family backgrounds and IQ scores, the Stanford-Terman children obtained high levels of education. Many had extraordinary career successes, reaching high posts in the government, making significant scientific breakthroughs, and gaining renown in television and movies. Yet others struggled, and the rates of divorce, suicide, and depression were higher than expected. One recurring theme in the data is that membership in the study, which was quite famous in its day, provided a sense of identity, purpose, and pride.

As the Stanford-Terman Study continued from decade to decade, it was used for many other purposes beyond its initial scope of studying the long-term consequences of intelligence. It has been especially useful for investigating trajectories of individual behavior over time, the role of transitions and turning points in peoples' lives, and how individuals respond to historical events. George Vaillant's 1983 study of the lives of alcoholics is a fascinating example. Also influential has been the work of Elder and others on the timing of life events, which has shown how one's year of birth determined whether Termites hit major events (e.g., the Great Depression [1929–1939], World War II [1939–1945], and so forth) at "good" or "bad" times in their lives and ultimately influenced how their lives turned out in the long run.

Started for one specific purpose, the Stanford-Terman Study has been used more often for other purposes. Although a highly specialized sample, its sheer longevity makes it incredibly valuable to life course research, especially on the long-term consequences of early experiences.

The Stanford-Terman Study is archived at the Henry A. Murray Research Archive at Harvard University. More information about access can be found at the Web site supported by the archive. The original sample included 1,528 boys and girls, and the timeframe of the study is from 1927 through 1986.

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# DATING AND ROMANTIC RELATIONSHIPS, CHILDHOOD AND ADOLESCENCE

From the plays of William Shakespeare to contemporary Hollywood films, popular culture has highlighted the importance of adolescent dating and romance. Social science research has emerged to confirm that these romantic experiences are an important part of the life course and human development. These experiences contribute to the development of identity and interpersonal skills, as well as provide a forum for sexual activity. Adolescent romance may also act as a gateway to romantic and sexual relationships later in the life course. This entry provides an overview of adolescent dating and romantic relationships in the United States, including key terms and concepts, theoretic perspectives, some basic trends about the prevalence of these experiences and the consequences for adolescents, and the direction of current and future research in this field. Although it may be easy to dismiss romance as fleeting and inconsequential material for teen comedies, the prevalence and centrality of these relationships in adolescent life coupled with empiric research documenting far-reaching consequences suggest the importance of critically examining adolescent romantic relationships.

## TERMS AND CONCEPTS

Although the terms *dating* and *romantic relationship* are often used interchangeably, it is useful to differentiate the two, particularly when discussing adolescents. The term *romantic relationship* refers broadly to a range of behaviors and emotions that occur between two persons. Although *dating* also refers to these experiences, it is difficult to separate from the concept of a "date," which is a specific behavior that may or may not happen within an adolescent romantic relationship. Other terms are used by adolescents themselves to describe these romantic experiences, and these vary temporally and geographically (e.g., going steady). Despite the wide array of conceptualizations of romantic activity, recent academic publications primarily use romantic relationship to describe these experiences.

Researchers have also grappled with conceptualizing romantic experiences and measuring the incidence of these experiences. For instance, two major survey instruments used in the study of adolescent relationships use different questions. The National Longitudinal Study of Adolescent Health (Add Health) asks respondents to list any same or opposite sex *special romantic relationships*, as well as asks about nonromantic sexual relationships. After extensive pretesting, the Toledo Adolescent Relationship Study (TARS) employed a section that asks about opposite sex *dating*, using the definition that dating means "when you like a guy [girl], and he [she] likes you back," but that it does not require going out on a formal date (Giordano, Longmore, & Manning, 2006).

The concept of romantic relationships contains multiple dimensions, including emotional and physical elements. The emotional dimension captures feelings such as physical attraction, a sense of intimacy, love, and personal closeness. The physical dimension includes sexual activity, but also nonsexual contact, such as holding hands and kissing. However, relationships may also be characterized by behaviors (such as going out alone on a formal date) or by the social recognition of the relationship by peers.

Although the activities and emotions just given form a foundation for defining romantic relationships, romantic experiences in adolescence take many different forms. Some relationships, particularly those in later adolescence, may rival that of adult relationships in terms of emotional intensity and physical activity. However, other relationships may be low on the emotional dimension, may contain no physical contact, or in some cases are characterized by neither dimension. Relationships most commonly form with partners of the opposite sex, but same-sex romantic relationships also occur in this period.

Romantic encounters have long been an important element in adolescence, but the implications of these relationships have shifted with cultural changes regarding gender, sexuality, and the increasing age of marriage. Relationships in adolescence were formerly tied closely to marriage, but they are less so connected now with the increasing age at first marriage (Fields, 2003). Relationships also were once characterized by formal rules of behavior, particularly around gender norms and appropriate levels of physical intimacy. Although this traditional model of romance may have largely disappeared for contemporary adolescents, romantic relationships continue to be central to the teenage experience and are still prevalent, with most adolescents reporting some type of romantic experience by age 18 (Carver, Joyner, & Udry, 2003).

## PERSPECTIVES ON ROMANTIC RELATIONSHIPS

Early theories of adolescent romance focused on the developmental implications, highlighting these experiences as a crucial component of the life stage (Sullivan, 1953). Erikson's classic description of identity formation (1968) cites romantic relationships as crucial to the development of emotional intimacy. Interactions in childhood revolve around the family and same-sex peer groups, but adolescence reflects a time for mixed-sex peer groups, and the emergence of romantic pairs.

Developmental theories have paid specific attention to how the form and function of romantic relationships change over time and across adolescence. Shulman and Seiffge-Krenke (2001) summarize developmental research and theory identifying four sequences: initiation, affiliation, intimate, and committed. The initiation stage includes limited contact, with the primary benefit of giving the adolescent confidence that he or she can find a romantic partner. Affiliation involves going out in peer groups, and these relationships are generally characterized by partner companionship. In intimate relationships, there is a more clearly identified *couple* orientation, and these relationships may involve sexual activity. The final phase is a committed relationship, which is long term and involves deep intimacy and caring, and may resemble adult relationships.

Consistent with this perspective of the changing nature of relationships over the adolescent period, research finds that the duration of relationships varies with the age of the adolescent. Although Carver, Joyner, and Udry (2003) found an average relationship duration of 14 months, adolescents age 14 and younger reported an average duration of 5 months, and those 16 and older reported an average of 21 months. One element in extending this development perspective is situating these romantic experiences on a trajectory into adult relationships (including romantic, cohabiting, and marital unions). Research finds that adolescents who form romantic

relationships report higher expectations to marry after they reach adulthood (Crissey, 2005) and are more likely to form relationships, cohabit, and marry in early adulthood (Meier & Allan, 2007; Raley, Crissey, & Muller, 2007). This research supports Meier and Allan's (2007) depiction of adolescent romantic relationships as the *social scaffolding* for romantic experiences in early adulthood.

Gender is particularly important in the study of heterosexual adolescent romance. Although both boys and girls have romantic relationships, these experiences may not be the same. Cultural expectations of traditional gender roles are frequently most salient in romantic relationships, and Feiring (1999) argues that the development of romantic relationships coincides with and encourages the development of gender identity with girls and boys experiencing greater conformity to their gender roles when they are engaged in romantic relationships. In addition, the centrality of dating is also likely to vary by gender, with romance traditionally having greater importance for girls compared to boys (Hudson, 1984). Interest in heterosexual relationships is ubiquitous in female peer groups, and being attractive to potential mates consumes a considerable amount of the time and energy, but research has not found this in male peer groups (Holland & Eisenhart, 1990). However, boys are certainly not oblivious to romance, as research finds that adolescent boys are also emotionally invested in romantic relationships (Giordano et al., 2006).

The romantic experiences of adolescents also may be influenced by characteristics such as race, socioeconomic status, and family background. For instance, research has found that Black adolescents are less likely to form romantic relationships compared with their White peers (Crissey, 2005; Meier & Allen, 2007). Some evidence suggests that relationship characteristics vary by race, including dimensions such as duration and physical activity (Carver et al., 2003; Crissey, 2005; Meier & Allen, 2007). The development of the TARS romantic relationship section specifically addressed this by recognizing that the concept of a formal date is "strongly class-linked and would tend to exclude lower socio-economic status (SES) youth" (Giordano et al. 2006, p. 268).

A crucial component of these theoretical perspectives on adolescent romance is the recognition that these relationships emerge in a critical time for physical development. The pubertal period includes the emergence of sexual attraction, as well as the desire to engage in physical and sexual contact, and to form romantic relationships. The sexual component of adolescent experiences has received considerable attention, both from researchers and within public discourse. A large body of research on romantic relationships is rooted in the idea that these relationships serve as a main venue for adolescent sexual activity, and therefore provide the potential for pregnancy and contracting sexually transmitted infections. Research has found that adolescents who form romantic relationships are more likely to have sex (Kaestle, Morisky, & Wiley, 2002). Early sexual debut is particularly a concern for younger adolescents. However, compared to sexual partners who just met, adolescents in relationships are more likely to use contraception (Manning, Longmore, & Giordano, 2000).

Media attention has recently pointed to the sexual component of adolescent experiences with reports on the rise of nonromantic sexual encounters, termed *hooking up* and *friends with benefits*. These reports suggest that the conventional scripts of dating are extinct and that romance is no longer a feature of adolescent life. Published research suggests that this is not true. Although the norms of relationships have changed over the past few decades, teenagers still overwhelmingly participate in romantic relationships and report that these emotional experiences are desirable (Carver et al., 2003; Giordano et al., 2006).

Although the deviance perspective on romantic relationships focuses on sexual activity, researchers have also noted the potential for other negative consequences from romantic relationships. As recognized in the developmental perspective, romance is important for emotional development. Because these relationships are frequently emotionally charged, negative experiences may be particularly detrimental. Larson, Clore, and Wood (1999) note that romantic relationships are "the single largest source of stress for adolescents" (p. 35). Relationships may include arguments and infidelity, and they frequently end in a break-up. These experiences may lead to negative emotional consequences including depression, anger, and jealousy (Joyner & Udry, 2000; Larson et al., 1999).

Romantic relationships may also be problematic when considering differences between the partners. The developmental benefits of romantic relationships depend on age and emotional maturity. However, romantic relationships routinely occur between partners of different ages. This age gap can have various consequences for the younger participant, such as increased relationship intensity and duration, exposure to an older peer group, and involvement in activities such as going out alone or having sex. For example, young adolescent females with older partners have an increased risk of sexual activity and of not using contraception (Kaestle, et al., 2002; Manning, et al., 2000).

## GAY AND LESBIAN RELATIONSHIPS

The bulk of romantic experiences in adolescence are heterosexual, and consequently the vast majority of the research on romance considers opposite sex interactions. However, more recent research has paid specific attention

to the romantic experiences of sexual minority youth (including gay, lesbian, bisexual, and transgendered adolescents). Research from the TARS study found that 8% of respondents report being bisexual and 1% report being homosexual, whereas about 6% of respondents in Add Health report same-sex attraction. In the Add Health study, 2.2% of boys and 3.5% of girls who had a romantic relationship in the 18 months before the interview occurred had reported a partner of the same sex (Carver et al., 2003). Although the literature documents higher incidence of such negative outcomes as depression, school problems, and substance use for sexual minority youth, researchers suggest moving out of this *at risk* model to understand the experiences of these adolescents completely (Russell, Driscoll, & Truong, 2002).

## RELATIONSHIPS AND ABUSE

Romantic relationships can also be a venue for negative interactions such as coercion, violence, and abuse. The Centers for Disease Control and Prevention (CDC) estimates that about 1.5 million high school students, which is nearly 9% of the population, have been hit, slapped, or otherwise physically hurt by a romantic partner (CDC, 2006). According to a 2006 survey conducted by Teenage Research Unlimited, more than 60% of adolescents who have been in a romantic relationship report that their partner has made them feel bad or embarrassed about themselves. Furthermore, this study found that adolescents in romantic relationships experience pressure to have sex with their partners, physical and emotional abuse, and controlling behaviors such as repeated calls and text messages.

## CURRENT AND FUTURE DIRECTIONS

Despite the prominent role of romantic relationships in popular culture, the topic is only now amassing a large body of scholarly research with increasing recognition of the potential risks and rewards of these relationships. Researchers continue to explore the developmental benefits by connecting romantic experiences to the formation of adult relationships and marriage. By locating adolescent romantic relationships as a midpoint between the family of origin and adult relationships, research is uncovering how adolescent romance factors into development across the life course. The focus on negative consequences including those resulting from sexual activity, and more recently on emotional well-being, is beginning to widen to include implications for outcomes such as substance use and educational performance. Research dedicated to understanding the heterogeneity of romantic experiences, including differences by race, class, family background, and for sexual minority youth, continues to emerge.

Research can also continue to explore how the meanings and consequences of romantic relationships are changing with cultural and technologic changes. Gone are the days of the distant pen pal. Relationships can now be easily maintained in real time between partners on the opposite side of the globe using cell phones, e-mail, text messages, webcams, and other technologic modalities. With the expansion of virtual social networks, adolescents may form deep emotional bonds with people they will never meet in person. In fact, they may even form bonds with a figment of someone else's imagination. Media are filled with reports of the hazards of this type of interaction, but researchers are just beginning to explore how these technological changes are influencing adolescent development.

Romantic relationships continue to be a fixture on the modern adolescent landscape, even if these experiences bear little resemblance to the conventional notion of teenage romance. Romance continues to be an important component in the development of interpersonal skills and identity formation, as well as providing a training ground for romantic experiences in adulthood. Relationships also contain the potential for risk, including physical outcomes such as contracting a sexually transmitted infection, unintended pregnancy, and physical abuse, as well as a range of negative emotional outcomes. Researchers need to continue to study these romantic experiences to help parents, teachers, and teens themselves understand and navigate the adolescent period.

**SEE ALSO** Volume 1: *Health Behaviors, Childhood and Adolescence; Peer Groups and Crowds; Puberty; Sex Education/Abstinence Education; Sexual Activity, Adolescent; Transition to Marriage; Transition to Parenthood.*

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***Sarah R. Crissey***

# DAY CARE

SEE Volume 1: *Child Care and Early Education.*

# DELINQUENCY

SEE Volume 1: *Crime, Criminal Activity in Childhood and Adolescence; Theories of Deviance.*

# DEVELOPMENTAL SYSTEMS THEORY

The contemporary study of human development is focused on concepts and models associated with developmental systems theories (Cairns & Cairns, 2006; Gottlieb, Wahlsten, & Lickliter, 2006; Lerner, 2002, 2006) and on their use in understanding behavior across the life span (Baltes, Lindenberger, & Staudinger, 2006). The roots of these theories are linked to ideas in developmental science that were presented at least as early as the 1930s and 1940s (e.g., Maier & Schneirla, 1935; Novikoff, 1945a, 1945b; Von Bertalanffy, 1933), if not even significantly earlier—for example, in the concepts used by late 19th century and early 20th century founders of the study of child development (e.g., Cairns & Cairns, 2006). Developmental systems theory provides an innovative and important frame for the study of the human life span.

In the early 21st century, developmental systems theories are understood as a family of conceptual models that promote a holistic, or integrated, view of human development. Development is seen as a change process involving mutually (bidirectionally) influential relations among all parts of the individual (e.g., genes, hormones, brain, emotions, thoughts, and behaviors) and all levels of the ecology, or contexts, of life (such as families, peer groups, schools, after-school programs, businesses, faith institutions, neighborhoods, or the physical setting), all of which vary across time and therefore history. As such, in this theoretical approach, the whole individual is seen as "greater than the sum" of his or her parts (he or she is the "multiplication" of the parts, not the addition of them).

Accordingly, within a developmental systems perspective, the study of development does not attempt to isolate for analysis individual components of the overall system (e.g., genes, the person, the family). Because each part of the system is related to all other parts, the function and meaning of any part of the system is derived from this relation. Features of the individual (his or her genes or personality) and features of the context (his or her peer group, school, or culture) must be studied together, as they each influence each other across time. In other words, given the integration of all these levels, from genes to the physical environment and history (temporality), a developmental systems perspective emphasizes that complex and changing relationships exist between individuals and their

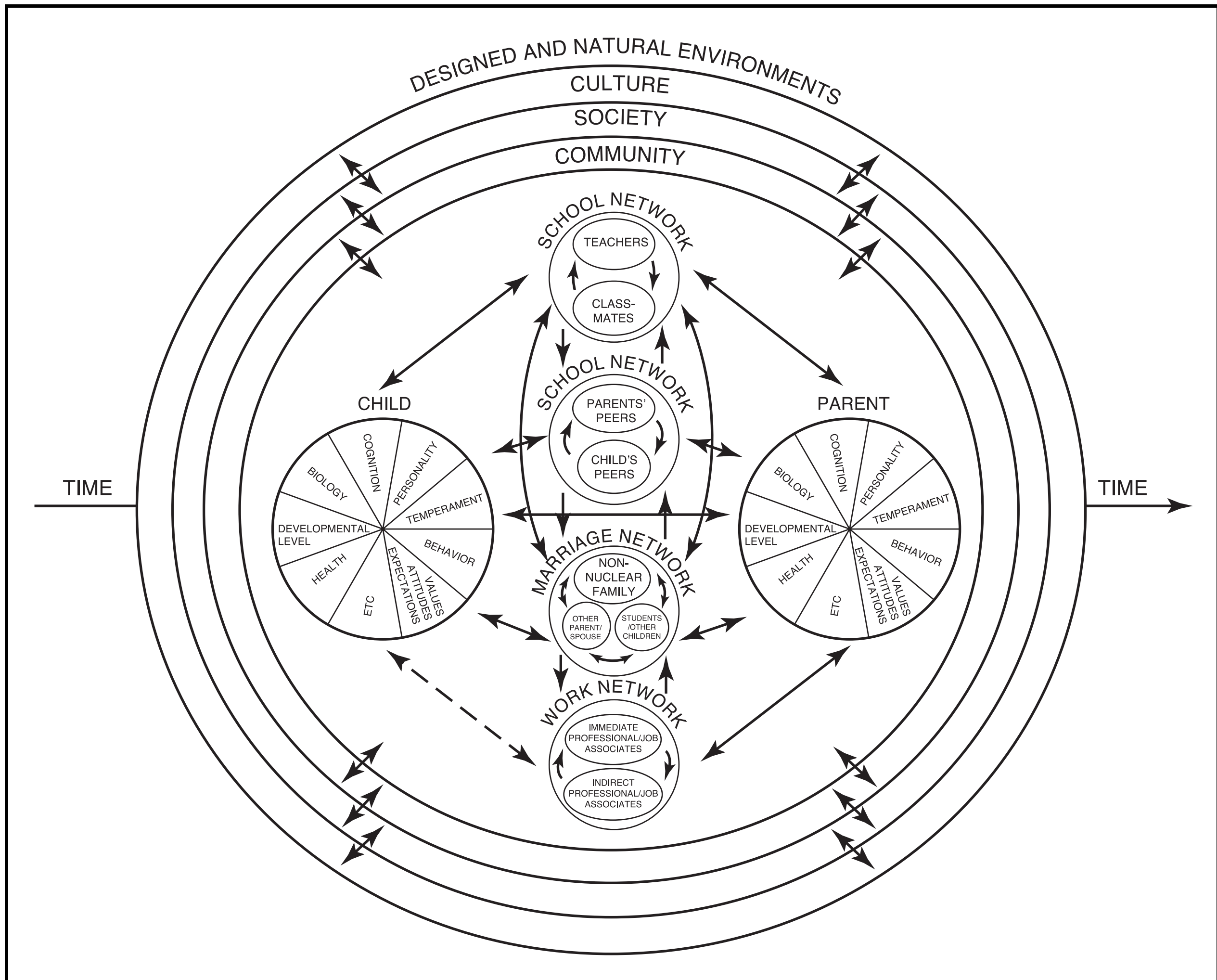


***Figure 1.*** *A developmental systems view of human development: Parent–child relations and interpersonal and institutional networks are embedded in and influenced by particular community, societal, cultural, and designed and natural environments, all changing across time (across history).* CENGAGE LEARNING, GALE.

ecology. This systematic integration of systems is known as *relationism,* and it stands in contrast to theories that attempt to dichotomize development, such as in the now passé nature versus nurture controversy. Figure 1 illustrates the integrated relations within the developmental system, here in regard to the links between a child, a parent, and the other levels within their ecology of human ecology.

Because all levels of the system are interrelated, they are also mutually influential. The characteristics and actions of a person affect and are affected by the features of all the other levels of organization within his or her social and physical ecology. Moreover, changes in the person (such as cognitive, emotional, and physical development across childhood and adolescence) mean that the individual will differentially affect the context. Individuals with different intellectual abilities and interests, with varying identities and purposes, or with different physical and health attributes and needs require different interpersonal and intellectual resources or educational or health programs to grow and prosper in healthy ways. In turn, environmental changes can elicit or require the development of new behaviors in individuals if healthy or positive behavior (i.e., adaptive functioning) is to exist.

Therefore, by influencing the contexts that influence them, individuals contribute to their own development. There is a bidirectional arrow (⟵⟶) between individuals and contexts. This bidirectional arrow signifies the mutually influential relationships between the person and all the other levels of organization in his or her biological, psychological, social, cultural, and physical world.

As discussed by Paul Baltes and colleagues (2006), these contextual changes can occur normatively across

age, such as in a young person's transition from elementary school to middle school or from high school to college or to the world of work. In addition, these changes can take place normatively across history (e.g., the invention of new electronic devices may make methods of interpersonal communication different for a new generation of youth in comparison to their parents' generation). Moreover, there can be nonnormative life events (such as accidents, diseases, or death of a loved one) and nonnormative historical events (wars, hurricanes, or economic depressions) that can require behavior and development to change if healthy functioning is to occur.

In short, to understand the character of human development across life, relations among all the levels of organization within the ecology of human development must be viewed holistically. In addition, the mutually influential relations between people and their real-life contexts (i.e., individual ⟷ context relations) need to be studied across the life span, because changes in person and/or in the context at any point within life or history can alter significantly the relations a person has with his or her world. Furthermore, because of the sensitivity of human development to changes in the ecology, developmental systems theory stresses that development happens in the real world, not in contrived laboratory situations. Changes in families, schools, businesses, or the physical environment can change the course of life.

## IMPLICATIONS FOR RESEARCH AND PRACTICE

This developmental systems theoretical approach has important implications for research and practice. For instance, the evaluation of an educational program must be framed by trying to understand the relation between an individual's unique qualities and the specific facets of a program. Do children's levels of cognitive development, interests, motivations, or behavioral skills match the content of a curriculum or its method of presentation (such as lectures or online delivery)? Does this fit between children and context apply also to adolescents, adults, and the aged, who vary in sex, race, ethnicity, religion, socioeconomic circumstances, or culture? A developmental systems perspective would provide an important framework for researchers and practitioners who seek to advance or promote for diverse individuals knowledge about, involvement in, or skills associated with such programs.

From these examples, it is evident that the unit of analysis within this theoretical approach is the relationship between an individual and the multiple levels that comprise his or her ecology, rather than the individual or the ecology alone. A person's development is determined by fused (i.e., inseparable and mutually influential) links among the multiple levels of the ecology of human development, including variables at the levels of inner biology (such as genes, the brain), the individual (such as personality, temperament, values, purposes, or cognitive style), social relationships (with peers, teachers, and parents), sociocultural institutions (educational policies and programs), and history (normative and nonnormative events, such as elections and wars, respectively).

The dynamic (i.e., mutually influential) changes that exist across the developmental system create openness and flexibility in development. The presence of such potential for change in development implies that there is a potential for plasticity (systematic change) across life. In turn, the plasticity of development means that one may be optimistic about the ability to promote positive changes in human life by altering the course of individual ⟷ context relations. In comparison to developmental perspectives that regard people as passive recipients of environmental stimulation (e.g., Bijou & Baer, 1961) or as automatons ("lumbering robots"; Dawkins, 1976) controlled by the set of genes acquired at conception, viewing development as a matter of at least relatively plastic individual ⟷ context relations suggests that each person is an important producer of his or her own development.

People can play an important role in determining the nature of their relationships with their contexts through characteristics of physical, mental, and behavioral individuality, including the setting of goals or purposes (Damon, Menon, & Bronk, 2003) and the actions they take to pursue their objectives (Baltes et al., 2006; Freund & Baltes, 2002). Through the purposes they set—for instance, their selection of goals (S), their skills and strategies for optimizing their paths towards their goals (O), and their abilities to compensate (C) when goals are blocked or purposes are not reached—individuals influence their own developmental trajectories (e.g., Baltes et al., 2006; Freund & Baltes, 2002).

Interaction between a child and a teacher may illustrate this active agency of individuals. A child with an "easy" temperament (e.g., an ability to rapidly adjust to new events and stimuli, a positive mood, and a long attention span) is likely to elicit positive, attentive responses from his or her teacher. Such responses may, in turn, promote further positive behaviors from the child. Ultimately, a healthy, adaptive teacher ⟷ child relationship is supported by such relations (Chess & Thomas, 1999). In turn, a child with a "difficult" temperament (e.g., slow to adjust to new stimuli, a negative mood, and a short attention span) may elicit negative reactions from a teacher; this temperament might contribute to problematic teacher ⟷ child relations. In both cases, the respective behaviors of both the child and his or her teacher have influenced the behaviors of

the other person in the relationship, and the child is therefore co-shaping the course of his or her own development. By underscoring the active contribution that each individual has on his or her developmental trajectory, the developmental systems perspective brings the importance of individual differences to the fore: As each individual interacts in a unique way with his or her context, he or she may develop differently from other individuals.

Therefore, from the developmental systems perspective, development is not seen as a simple, linear, cause-and-effect process but as a complex, flexible process whereby the actions and purposes of the individual play a causal role (Brandtstädter, 2006). Moreover, the reason that developmental systems theories place a strong emphasis on ecological validity (i.e., the importance of understanding people in settings representative of their real-world settings), as opposed to ecologically unrepresentative laboratory settings, is because this contribution of the person to his or her own development occurs within the actual ecology of human development—in the homes, schools, faith institutions, after-school programs, businesses, and physical settings of a community. Thus, a strength of developmental systems theories is that, rather than concentrating on a limited aspect of a person's functioning or focusing on people in contrived situations, it focuses on the diversity and complexity of human development, as it takes place in the contexts within which individuals actually spend their lives across the breadth of the entire life span.

In sum, the ideas of plasticity and optimism within the developmental systems perspective provide a theoretical foundation for applying developmental science to promote positive change across the life span. By devising programs and policies that have the flexibility to maximize the fit between diverse individuals and the settings of human development, the probability of positive development may be optimized.

## CONCLUSIONS

The interrelated features of contemporary developmental systems theories involve concepts such as relationism, the integration of levels of organization, historical embeddedness (temporality), relative plasticity, and diversity. These concepts lead to themes ranging from the importance of context for understanding human development to the idea that one may be optimistic that the application of developmental science can result in the promotion of positive development for diverse individuals across the breadth of the human life course. Developmental systems theories provide rich and varied conceptual tools for describing, explaining, and enriching the course of human development.

**SEE ALSO** Volume 1: *Cognitive Ability; Genetic Influences, Early Life; Social Development.*

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## DIABETES, CHILDHOOD

**SEE** Volume 1: *Illness and Disease, Childhood and Adolescence.*

## DISABILITY, CHILDHOOD AND ADOLESCENCE

According to the *International Classification of Functioning, Disability and Health*, Second Edition (ICIDH-2) (World Health Organization, 1999), not all impairments are disabling. Most scholars working in the field of disability studies in the early 21st century would define an *impairment* is an anatomic or physiologic trait or condition, the effects of which sometimes may be ameliorated by appropriate professional intervention. The term *disability* is used to describe conditions with social consequences. Because society stigmatizes people with disabilities and creates physical and social barriers to their full participation in society, they are at a disadvantage in relation to more typical individuals. This disadvantage is shared by families of children with disabilities (Darling, 1979). From the time they know or suspect that their children may have impairments, parents and other family members must adapt to this knowledge and to the reactions of others in society. The impact on family roles continues throughout childhood, adolescence, and beyond. The nonstandard life course trajectories of people with disabilities (and their families) reflect on how disability is socially constructed (Irwin, 2001).

### RESEARCH ON PARENTS

Most social science research on children with disabilities has focused on parents and families rather than on the children themselves. Many early studies concentrated exclusively on mothers; more recently, fathers and other family members have been included as well. Much early research dwelled on pathologic family reactions and suggested that childhood disability had a negative effect on family integration (Mandelbaum & Wheeler, 1960). More recent studies have noted some positive effects and have suggested that negative effects are more the result of societal barriers than of family pathology (Seligman & Darling, 2007).

Because most families have little experience with disability before the birth of an affected child, they are usually poorly prepared for the diagnosis and its consequences. This lack of preparation is sometimes complicated by medical professionals who withhold the truth about the child's condition, resulting in parental anomie (Darling, 1994). Interactional difficulties faced by parents during the early months postnatally involve negative reactions from family members, friends, and strangers. Usually by the end of infancy, most parents have resolved their anomie and have developed some strategies for coping with the reactions of others.

The goal of most families of children with disabilities is to achieve a lifestyle that is as close as possible to the norm for families with nondisabled children. The achievement of a normalized lifestyle may be related less to the degree of a child's impairment or parents' coping abilities than to the opportunity structure within which the family resides (Seligman & Darling, 2007). Barriers to normalization include lack of access to appropriate medical care, educational opportunities, child care, and other resources. Consequences include restrictions on parents' employment or career paths and social opportunities. Families who achieve normalization during the school years may again encounter difficulties when their children reach adolescence or adulthood, because of issues relating to limited opportunities for independent living.

The literature on childhood disability contains numerous accounts of difficult interactions between families and the professionals who work with them, including physicians, teachers, therapists, and others. Some of this difficulty derives from the conflicting roles of parents and professionals (Seligman & Darling, 2007) and from the continued presence of professional dominance (Leiter, 2004). Some newer training programs for medical professionals have been incorporating the family's point of view, resulting in some decrease in the power imbalance in the professional-family relationship (Darling & Peter, 1994).

### STUDIES OF CHILDREN

As already noted, most of the literature in this field has been centered on the effects on the family rather than on the reactions of the children themselves. However, a small social science literature on children does exist. Some early studies suggested that children with disabilities had lower self-esteem than other children. Like early studies of parents, this body of research had methodologic flaws, including reliance on clinical samples and lack of comparison groups (Darling, 1979). More recent research on children reflects the findings of studies of parents—that difficulties stem more from social disadvantage than from limitations inherent in the children's impairments themselves (Middleton, 1999).

In a discussion of children with disabilities in South Africa and other countries, Philpott and Sait (2001) argue that this population has been excluded from both children's programs and disability programs. They take

the view that in a context of poverty, disabled children are especially vulnerable to neglect and exclusion.

### CURRENT TRENDS AND POLICY IMPLICATIONS

Whereas earlier research tended to employ a medical model and to focus on parents' and children's coping strategies, more recent studies have tended to be based in a ''social'' model (Oliver, 1996) and to focus on social change. Federal legislation, like the Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA) in the United States and comparable legislation in other countries, has reflected a shift from a charity perspective to a rights perspective (Scotch, 2001). In the United States especially, children with disabilities are increasingly being educated in inclusive settings with nondisabled children. Future research must address the effects on children of greater integration into the societal mainstream.

SEE ALSO Volume 1: *Attention Deficit/Hyperactivity Disorder (ADHD); Autism; Cognitive Ability; Illness and Disease, Childhood and Adolescence; Learning Disability;* Volume 2: *Disability, Adulthood;* Volume 3: *Disability and Functional Limitation, Later Life.*

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## DIVORCE, EFFECTS ON CHILDREN

SEE Volume 1: *Child Custody and Support; Family and Household Structure, Childhood and Adolescence;* Volume 2: *Divorce and Separation.*

## DRINKING, ADOLESCENT

Adolescence is a period of the life course often characterized by an increase in engagement in behaviors that pose a risk of harm, including alcohol use. During adolescence many individuals begin to experiment with a variety of substances; alcohol is the most widely used. Research has examined the ways in which alcohol use progresses throughout this developmental period as well as across the life course. Scientists have gained a more complete understanding of adolescent drinking by identifying risk and protective factors that predict alcohol use and developing theories to explain these behaviors. Innovative research to address unanswered questions is ongoing, due to the importance of understanding adolescent alcohol use and its implications for the health of growing individuals.

### DEFINING AND STUDYING ALCOHOL USE IN ADOLESCENCE

Research attempting to indentify antecedents and consequences of adolescent alcohol use typically examines four distinct constructs: age of initiation (or onset), frequency of alcohol use, intensity of alcohol use, and heavy episodic (or binge) drinking. Taken together, measures of initiation, frequency, and intensity illustrate the overall pattern of an individual's consumption of alcohol. The definition of the *age of initiation*, also called onset, differs slightly based on what researchers are interested in examining. Age of initiation has been operationalized as the age at one's first drink (more than a few sips), first regular use (i.e., weekly use), or first episode of drunkenness. Early

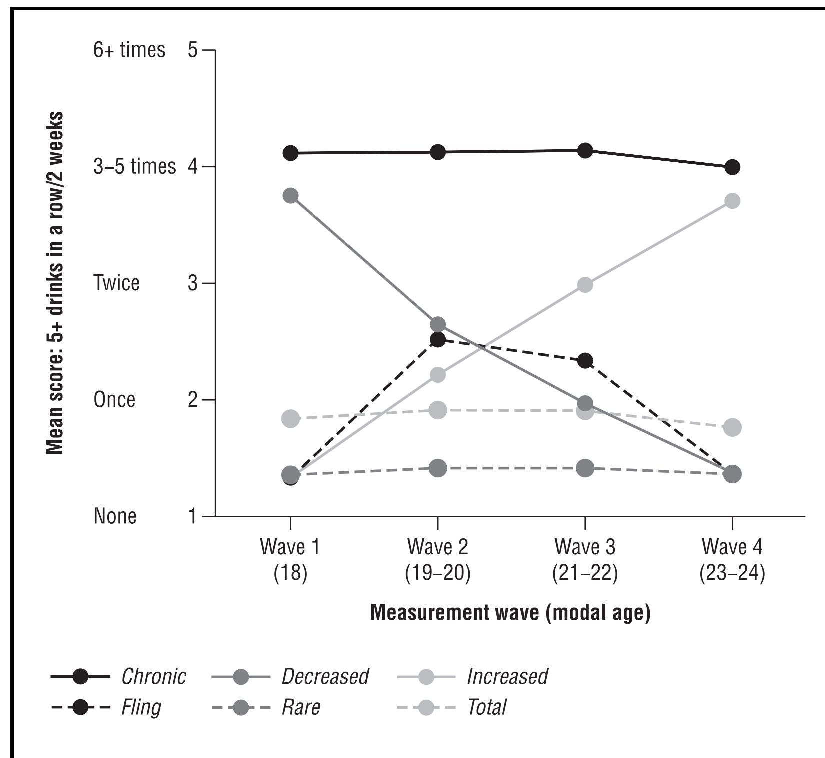


***Figure 1.*** *Mean scores for five or more drinks in a row in the past two weeks by binge drinking trajectory.* CENGAGE LEARNING, GALE.

alcohol use is considered detrimental largely because of its association with continued use, association with deviant peer group selection, contribution to injuries and accidents, and negative effects on the developing brain during childhood and adolescence.

*Frequency* of alcohol use describes how regularly or how often adolescents consume alcohol. Some adolescents use alcohol sporadically whereas others are habitual users. Often individuals are asked to mentally aggregate their behavior. For example, they may be asked to report *how often*, on average, over the past 12 months they consumed alcoholic beverages, from never, to once a week, to every day.

Measures of *intensity*, or *quantity*, generally assess how *much* an individual drinks on an average drinking occasion or on a peak drinking occasion. Combined with knowledge of an individual's gender, weight, and the amount of time over which the drinks were consumed, researchers use total quantity of drinks to calculate a person's peak *blood alcohol concentration* (BAC). BAC is an estimate of the level of intoxication an individual experienced, with high levels associated with specific physiologic effects (e.g., impaired judgment, blacking out). Therefore, intensity of alcohol use is associated with acute health risks that may be relatively minor, such as injury, or severe, such as death due to alcohol poisoning.

One specific way to describe the intensity of alcohol use is *heavy episodic drinking*, also called *binge drinking*. Heavy episodic drinking describes an occasion when a man consumed five or more drinks in a row or a woman consumed four or more drinks in a row. The discrepancy in the number of drinks by gender takes into account the relative weight differences and differences in ability to metabolize alcohol. Therefore, the gender difference in number of drinks reflects the amount of alcohol necessary to reach a similar BAC (i.e., become intoxicated). This measure is intended to describe an individual's drinking behavior over a relatively short amount of time (e.g., an evening), rather than a "binge" over several days.

Adolescent alcohol use is widespread. Data from the 2006 Monitoring the Future Study indicated that alcohol use had been tried by 41% of eighth graders, 62% of tenth graders, and 73% of twelfth graders in the United States and that 20%, 41%, and 56% in these three grades had been drunk at least once in their lifetime. Further, heavy episodic drinking at least once in the prior 2-week period was reported by 11% of eighth graders, 22% of tenth graders, and 25% of twelfth graders (Johnston, O'Malley, Bachman, & Schulenberg, 2007). Although alcohol use is common, it has many risks and negative consequences. Immediate consequences include fighting, injury, risky sexual behavior, victimization, alcohol poisoning, and drunk-

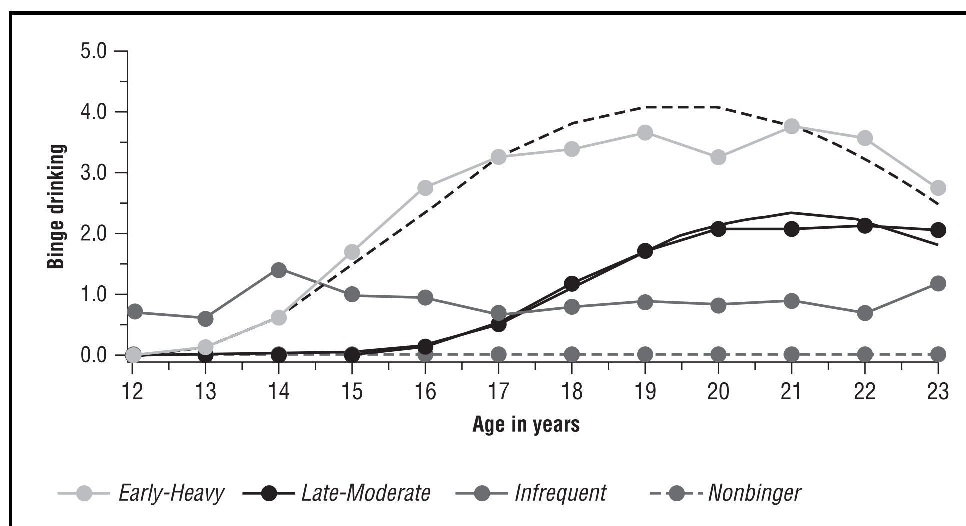


***Figure 2.*** *Growth curve trajectories of binge drinking from adolescence through emerging adulthood. Solid lines represent estimated growth trajectories. Dashed lines represent observed means of binge drinking at each age.* CENGAGE LEARNING, GALE.

driving fatalities (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002). Long-term consequences include academic failure, alcoholism, and deficits caused by alcohol's effects on the developing adolescent brain. Each year in the United States, about 5,000 people under age 21 die as a result of motor vehicle crashes, unintentional injuries, homicides, and suicides that involve underage drinking (NIAAA, 2004/2005).

## DEVELOPMENTAL TRENDS IN ALCOHOL USE

In general, people's use of alcohol tends to increase during adolescence before peaking and then decreasing during the transition to adulthood (see reviews by Maggs & Schulenberg, 2004/2005; Schulenberg & Maggs, 2002). Some social role changes accompany these average drinking increases (e.g., college entrance) and decreases (e.g., spousal and parenting roles). Within these broad normative trends are specific pathways (or trajectories) followed by individuals or small groups of people with more similar origins, developmental course, and outcomes of their alcohol use (see Figure 2). The most common, and lowest-risk, trajectory reflects drinking patterns of abstainers, light drinkers, very rare heavy drinkers, or individuals who rarely drink at high levels regardless of age (i.e., a low, flat line for amount of heavy drinking over time). A second pattern is stable-moderate drinking, described by some heavy drinking during adolescence and early adulthood but without dramatic escalation to severely problematic levels.

Groups of more problematic alcohol users have also been identified. Chronic heavy drinkers typically begin using alcohol at relatively young ages (by middle adolescence) and continue to use at high rates into their twenties. A second more problematic group, late-onset heavy drinkers, tends to initiate drinking slightly later—for example late in high school—but to increase steeply in drinking and continue heavy use into early adulthood. A third more problematic trajectory, for individuals often called "fling" drinkers, exhibits heavy drinking within a developmentally limited time period and desists by late adolescence or early adulthood. In the realm of clinical psychology, Zucker (1995) has identified four types of alcoholism that are distinguished by their antecedent causes, courses, and outcomes. One of these types, *developmentally limited alcoholism*, shows a similar pattern to the fling drinkers, that is, time-limited, peer-focused heavy drinking that reduces spontaneously with the successful assumption of adult family and career roles.

## ALCOHOL-RELATED RISK AND PROTECTIVE FACTORS DURING ADOLESCENCE

Certain personal and social-environmental characteristics have been consistently associated with heavier adolescent alcohol use (Hawkins, Catalano, & Miller, 1992). The antecedents of adolescent alcohol use can be conceptualized into two categories: risk factors and protective factors. *Risk factors* are variables (e.g., personal, family, environmental characteristics) that predict a higher likelihood of a negative outcome, in this case of using or abusing alcohol (Maggs & Schulenberg, 2005). Some commonly researched risk factors for adolescent alcohol

use include genetic vulnerability, childhood impulsivity, sensation seeking proclivity, psychiatric diagnoses, family history of alcoholism, heavy drinking peers, positive alcohol related expectancies, and childhood trauma (Griffin, Scheier, Botvin, & Diaz, 2000; NIAAA, 1997). In addition, early initiation of alcohol use in adolescence (prior to age 14–16) is a noted risk factor for later problems including heavy alcohol use, drug use, and driving after drinking (Hawkins et al., 1997).

Gender is also a risk factor: Men tend to drink more than women. In addition, individuals who do not live with two biologic parents and who have parents who use alcohol more heavily and have more symptoms of alcoholism are more likely to use heavily themselves. Male heavy drinkers in late adolescence are also especially likely to have exhibited more externalizing symptoms, such as delinquency and aggressivity (Maggs & Schulenberg, 2004/2005). In regard to ethnicity, White and Hispanic high school students are more likely to report using alcohol than their Black peers (Johnston, O'Malley, Bachman, & Schulenberg, 2007). Disparities in risk are also found among varying levels of socioeconomic status, with higher rates of alcoholism found among families of lower socioeconomic status (Ellis, Zucker, & Fitzgerald, 1997).

In contrast, *protective factors* are variables that predict a higher likelihood of a positive outcome. In this context, protective factors would be characteristics that are likely to result in abstaining from alcohol use, later initiation or lower levels of alcohol use, or fewer alcohol-related negative consequences. Examples of such protective factors include school commitment, academic achievement, religious involvement, prosocial peer involvement, peer acceptance, self-esteem, parental attachment, parental involvement, and structured free time. In many studies, the lack of an established risk (e.g., not having parents who drank heavily) might also be considered as protective (Hawkins et al., 1992).

When accounting for possible risk or protective factors of alcohol use during adolescence, the concepts of equifinality and multifinality must be considered (Cicchetti & Rogosch, 1996). That is, the same problem may have different causes, and not all people exposed to a given risk factor will develop the problem. These terms, therefore, highlight the varying nature of risk and protective factors and help to explain why some people do not develop problems despite exposure to significant risk factors, and why some individuals do develop problems despite little exposure to risk factors. Equifinality involves the idea that different patterns of risk and protective factors may lead to the same outcome. For example, heavy alcohol use in adolescence may be caused, in part, by a family history of alcoholism for some youth and by peers who use alcohol heavily for others. Multifinality denotes the idea that a given pattern of risk and protective factors may lead to many different outcomes. For example, parental alcoholism has been shown to increase the likelihood of alcohol misuse and dependence in some people, whereas it causes others to abstain from alcohol completely (Sher, 1991).

Much is known of the vast array of potential risk and protective factors for adolescent alcohol use. However, due to the notions of equifinality and multifinality, our understanding of exactly how risk and protective factors work together to predict an individual's behavior or how they are more or less influential at different phases of an individual's life remains somewhat limited.

## THEORIES OF ADOLESCENT ALCOHOL USE

Several important theories have been applied to alcohol use in adolescence and early adulthood (see review by Chassin et al., 2004). The overarching *developmental-contextual perspective* (Baltes, 1987; Lerner, 1982) asserts that development occurs across the lifespan in multiple domains of functioning (e.g., cognitive, interpersonal, emotional) as individuals select and accommodate to multiple contexts. These processes are especially evident during transitions, and the adolescent transition to alcohol use is no exception. Several factors influence the timing and course of alcohol use for individuals, as already discussed. Three main theoretical perspectives on adolescent alcohol use are reviewed here.

*Social control theory* is a dominant perspective in sociologic delinquency research that argues that adolescents who are not connected to institutions (e.g., schools, religious organizations) and role models (e.g., parents, teachers) in society are more likely to engage in risk behaviors, including alcohol use (Elliott, Ageton, & Canter, 1979; Hirschi, 1999). Several versions of the theory exist, but the unifying concept is that delinquent behavior is the result of weakened ties to the values and norms of conventional society. As a result of weak bonds to people and organizations that would provide norms for prosocial behavior, people may use alcohol or other drugs. Delinquency is learned through imitation and differential reinforcement. Social control theory is a general deviance hypothesis that describes the quality of informal social controls as shapers of risk behavior initiation, behavior maintenance, and behavior change.

Second, *problem behavior theory* is a well-known and oft-cited perspective to explain substance use (Jessor & Jessor, 1977; Donovan, Jessor, & Costa, 1988). Problem behavior is defined as behavior that (a) is considered inappropriate for adolescents, (b) departs from the social and legal norms of society at large, and (c) tends to elicit social control responses from authoritative institutions. This definition is broad, and therefore problem behavior theory contends that adolescents with these characteristics

***Keg Party.*** *Alcohol is the most widely used substance among adolescents.* AP IMAGES.

tend to engage in multiple problem behaviors, including alcohol use, illicit drug use, delinquency, and precocious sexual behavior. The prediction of both problem and conventional behaviors is hypothesized to be possible through the influences of demographic characteristics, and, primarily, through the influences of the *personality system* (i.e., motivations, beliefs, and attitudes) and *perceived-environment system* (i.e., peer and parental supports and approval of behaviors).

Third, from the tradition of experimental psychology, the *theory of reasoned action* is a widely acknowledged model for understanding behavioral intentions in many domains, including substance use. This theory asserts that attitudes and expected consequences from drinking, as well as the perceived social norms of alcohol use, explain the behavior (Fishbein & Ajzen, 1975). *Attitudes* are defined as an individual's belief that a behavior will lead to a given set of consequences (e.g., having more fun, having a hangover), weighted by the value attached to those outcomes (e.g., very important to me to experience or avoid). Subjective *social norms* are defined as the combination of normative beliefs (i.e., perceived approval of drinking by others) and motivation to comply with these beliefs. The theory of reasoned action focuses on attitudes about drinking and beliefs about social norms for use and resulting consequences. It has also been extended into the theory of planned behavior by Ajzen (2001) to include perceptions of control over the behavior.

## TRENDS IN RESEARCH ON ALCOHOL USE

Trends in research on alcohol use and abuse among adolescents are focused largely on improving the quality of data. Innovative approaches include assessing adolescent drinking expectancies, behaviors, and consequences on a series of specific days (or drinking occasions) to understand better why and how adolescents use alcohol and their experiences when they do. For example, new developments in statistics such as multilevel models allow researchers to ask whether people drink more on days they are in a better mood compared with occasions when they are in a worse mood, instead of just asking whether people who are more or less happy drink more than others. Such data will allow researchers to understand more fully the reciprocal relations of alcohol use and constructs such as affect, sexual behavior, other drug use, and sleep patterns of adolescents.

To improve understanding of normative developmental changes in alcohol use, person-centered analysis of substance use over time is becoming increasingly popular. Statistical strategies include latent transition analysis, which models how people move in and out of discrete categories (e.g., current alcohol user or not) over time, and trajectory analysis, which fits a curve to the patterns of alcohol use (see Figure 2), are increasingly popular. These statistical approaches enable researchers to identify developmental patterns of alcohol use across early, middle, and late adolescence that differentiate potentially problematic alcohol users. In addition, these approaches may help prevention efforts to identify adolescents who are particularly at risk for future alcohol-related harm and addiction based on early indicators.

In addition, genetically informed designs—for example twin and adoption studies—are able to control for biologic differences in sensitivity to alcohol and for environmental factors such as patterns of parental use. These designs provide important information about the causes and effects of alcohol use initiation and maintenance (Fowler et al., 2007). Furthermore, because individuals who initiate alcohol use earlier are also likely to continue using it, the true influences of early initiation on later alcohol problems and dependence is not firmly established.

Approaches for the prevention of alcohol use by adolescents and interventions to reduce harmful use are being developed. Efficacious programs include approaches that teach refusal skills (Botvin & Griffin, 2002), focus on changing perceived social norms for use (Walters & Neighbors, 2005), correct expectancies of alcohol's positive effects (Baer, Kivlihan, Blume, McKnight, & Marlatt, 2001), or use environmental strategies (e.g., checking identification, reducing alcohol outlet density) (Imm et al., 2007). Randomized trials of prevention programs that are designed to reduce risk factors (e.g., delay initiation of use) or increase protective factors (e.g., increase positive leisure time use) to produce positive changes in outcomes of interest (e.g., fewer alcohol-related negative consequences) can also inform an understanding of the

development and course of alcohol use in the lives of individuals.

**SEE ALSO** Volume 1: *College Culture; Drug Use, Adolescent; Health Behaviors, Childhood and Adolescence; Mental Health, Childhood and Adolescence; Peer Groups and Crowds; School Culture; Theories of Deviance;* Volume 2: *Health Behaviors, Adulthood;* Volume 3: *Health Behaviors, Later Life.*

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# DRUG USE, ADOLESCENT

Use of illicit drugs by adolescents has been a concern for many years. Because most developed societies in Europe, Asia, and North America prohibit the use of tobacco and alcohol by those under the age of 16 or 18, and laws are in place proscribing the use of marijuana, cocaine, and other psychoactive substances, adolescent drug use falls under the purview of the juvenile justice system. Furthermore, it is a relatively common behavior that is studied by scholars from several academic disciplines, including medicine, public health, psychology, sociology, economics, and anthropology. Concerns about drug use have also led to well-funded federal, state, and local government programs designed to detect, prevent, and treat adolescent drug use and users. The study of adolescent drug use includes examining the reasons for use, patterns and consequences of use, prevention programs designed to identify and curb use, and treatment for those who develop problems associated with use. Important research has also focused on two distinct developmental issues: (a) development of use from one type of drug to another; and (b) consequences of adolescent drug use for social and psychological development and the achievement of life course milestones.

## WHY ADOLESCENTS USE DRUGS

Several biological and social scientific theories attempt to explain why adolescents use drugs; however, they rarely distinguish among types of drugs. Biological theories tend to address risk factors such as low impulse control or impaired neurochemical functioning. For instance, some genetic-based theories argue that adolescents with impaired dopamine, serotonin, or monamine oxidase (MAO) functioning—which are associated with impulsivity, aggression, and sensational-seeking personality traits—are at greater risk of drug use and problems related to use.

Psychological theories have increasingly adopted cognitive-affective or social learning approaches. Cognitive-affective theories suggest that adolescents who know where to find and successfully use drugs are more likely to use them. A similar approach focuses on refusal self-efficacy to point out that some youth are incapable of refusing to use drugs when they are offered, whereas others have stronger refusal skills, perhaps because of personality traits, such as emotional stability or conscientiousness.

Social learning theory focuses on relations with others, in particular by studying the interplay between an adolescent's definition of drug use and the definitions—or what some call *beliefs* or *cognitions*—of the adolescent's family members, friends, important adult figures, and role models. According to this perspective, three stages culminate in the development of regular drug use: initiation based on observing and imitating significant others; continuation based on social reinforcement by significant others; and the adoption of beliefs that positive outcomes are associated with drug use, but few costs (e.g., more satisfactory social relationships, enjoying the effects of a drug, low risk of being caught and punished). Cognitively focused versions of this theory further point out that self-efficacy about the use of drugs can develop through observing the actions or listening to the beliefs of significant others. For example, if close friends discuss the merits of use and how to use drugs without getting caught, an adolescent's self-efficacy concerning use is magnified.

Other social psychological and sociologically based theories emphasize weak attachments to conventional sources of socialization (e.g., parents, schools) and stronger attachments to peers who may encourage drug use. Adolescents who experience weak attachments to parents or schools, stronger attachments to peers, and values that are conducive to drug use, such as alienation or lack of conformity, are at high risk of use. Furthermore, adolescents who have stressful personal or social environments may find that drug use either alleviates the stress or offers a way to cope with the stress that is unavailable through conventional means. The Social Development Model (SDM) expands this attention to social factors by pointing out that some influences are more salient during certain developmental periods. In childhood, family influences are more important and thus when they are fractured or disrupted, the stage is set for risky behaviors such as drug use. During adolescence, peer influences emerge and become more important than family or school influences. According to SDM, drug use is usually adopted if adolescents become involved with peers who use drugs. But this is more likely if, during earlier developmental periods, they had relatively few positive social interactions at home or in school, they were not taught adequate interpersonal skills by their parents and siblings, and they received little positive reinforcement at home or at school.

Other theories argue that adolescents who use drugs tend to be oriented toward short-term objectives at the expense of long-term goals; have low self-esteem that is bolstered by drug use, perhaps because of peer-acceptance; or are poorly supervised or supported by parents. Some researchers have attempted to combine various aspects of these theories into one model, such as Jessor's Problem Behavior Theory (PBT) (Jessor & Jessor, 1997) or Oetting and Beauvais's (1987) Peer Cluster theory. These theories tend to distinguish among proximal influences (e.g., peers) and distal influences (e.g., poor family relations, temperament) on drug use.

Another popular theory does not try to explain directly why adolescents use drugs, but rather focuses on the sequencing of drug use. Known as the *gateway hypothesis*, it proposes that a well-established pattern of drug use exists that begins with inhalants or cigarettes and alcohol, shifts to marijuana, and then, for some adolescents, ends up with cocaine and other illegal drugs (e.g., LSD, heroin). Somewhere along this progressive pathway, some adolescents develop a substance-use disorder, such as drug dependence or drug abuse, which includes unsuccessful attempts to decrease use, tolerance (requiring more of a drug to get the same effect), or withdrawal symptoms (physiological discomfort manifest when the person stops using a particular drug). The gateway sequence is often described as a funnel, where few users move on to the use of other drugs. Moreover, although the sequencing has been fairly well-established, debate continues over whether the use of one drug causes the use of another, or whether certain drugs act as gateways to other drugs merely for social, psychological or cultural reasons. One promising notion is that adolescents who move farther into the sequence, especially those who become dependent, tend to have mental health problems. Moreover, research suggests that those who move on tend to be more frequent users or use a greater variety of drugs (e.g., regular use of cigarettes, alcohol, *and* marijuana prior to cocaine use).

***Teenage Boys Smoking Marijuana.*** *During adolescence, peer influences emerge and become more important than family or school influences.* INGRAM PUBLISHING/GETTY IMAGES.

## CORRELATES OF ADOLESCENT DRUG USE

In addition to theories that try to explain the reasons for drug use, substantial information has been reported on the most common correlates or risk factors associated with use. These correlates may be divided into intrapersonal, interpersonal, institutional, and community factors. The intrapersonal factors that are positively associated with adolescent drug use include physiological and psychological conditions such as impaired dopamine, MAO, or serotonin functioning that may have a genetic basis; attention deficit/hyperactive disorder (ADHD); oppositional defiant disorder/conduct disorder (ODD/CD), which is often manifest by aggression, delinquency, and nonconformity; depressive disorders, particularly in girls (but not in boys); impulsivity; early pubertal onset; poor cognitive skills or school performance; and a sensation-seeking personality. Attitudes and norms that favor drug use, or failure to see the risks of use, are, not surprisingly, positively associated with use. Evidence is inconsistent regarding the association between demographic characteristics (e.g., sex, ethnicity, socioeconomic status) and adolescent drug use, although African Americans report a lower prevalence of some types of drug use (e.g., cigarettes) than Whites in many surveys.

The most frequently studied interpersonal influences are relations with family members and friends. Many studies indicate that drug use or dependence/abuse among parents, poor parenting skills, or lack of parent-child relations are associated with a higher risk of drug use among adolescents. The dynamics of these relationships are not fully understood but seem to stem from early childhood experiences in which parents rely on authoritarian or permissive methods with children, exhibit overly aggressive or avoidant parenting strategies, fail to supervise children, or themselves provide models of drug use to children. A combination of these factors may lead to rejection by conventional peers and acceptance by other adolescents who have experienced the same difficult family lives. These types of peer relations, which often mirror coercive family relations, increase the risk of misbehaviors, including the use of drugs such as cigarettes, marijuana, and cocaine. If poor family relations, lack of parental supervision, and generally lower involvement in family activities continue during adolescence, a spiral of delinquency and drug use is increasingly likely. For example, studies showing that adolescents who regularly share meals with their families or talk to their parents frequently are at lower risk of drug use may reflect the consequence of this developmental pathway away from or toward drug use. Finally, other studies indicate that having an older sibling who uses drugs increases the likelihood of drug use among adolescents.

Evidence is clear and consistent that the most powerful risk factor involves friends who use drugs. Solitary use, at least initially, is rare. Rather, adolescent drug users usually have friends who also use, and they tend to use together. The complication for research on this issue concerns the causal sequence: Does associating with certain peers lead to drug use, or does drug use lead to associating with others who use drugs? Studies have

frequently relied on adolescents' reports of their friends' behaviors to estimate the association with peer use. However, this has led to an overestimation of peer effects because adolescents tend to estimate their friends' use as corresponding to their own level of use. More rigorous studies that query adolescents and their friends about drug use suggest that peer influences are not as strong as previous studies indicated. Nevertheless, it is likely that peer influences are the consequence of other intrapersonal and family-based factors that increase the risk of associating with, as well as influencing, friends' behaviors.

Institutional factors that are associated with adolescent drug use involve families, but also include schools, religious organizations, and community influences. Although the most frequently studied family influences involve relations with parents or siblings, there is also evidence that family structure is associated with drug use. Adolescents who live with two biological parents appear to be at lowest risk of drug use, whereas those living with a single father or with no biological parent are at highest risk. The reasons for these associations are not well understood nor are they accounted for fully by other factors (e.g., family relations, socioeconomic status). A promising hypothesis, however, is that they may reflect stressful living conditions or custody decisions wherein the most difficult adolescents are placed with fathers or tend to be placed in alternative care arrangements.

Some evidence shows that adolescents who attend poorly organized schools, schools with indifferent teachers and administrators, or schools that include a high concentration of drug users are at heightened risk of drug use. However, school policies and programs designed to discourage drug use have been shown to have little effect. Evaluations of several large, school-based drug prevention programs, such as Drug Abuse Resistance Education (DARE), indicate that they are not effective in deterring adolescent drug use over the long term. Moreover, drug testing programs, which many secondary schools have adopted, appear to have little effect on rates of use among students. The most promising school-based prevention programs are those that focus on commitments, norms, or intentions not to use drugs, have *booster* sessions led by peers about a year after initial program delivery, use interactive delivery methods (e.g., frank discussions between adolescents and program leaders), and have parallel community programs designed to prevent adolescent drug use.

Attention has been growing about the influence of religious beliefs, practices, and organizations on adolescent drug use. Religious influences have been addressed at both individual and aggregate levels. At the individual level, studies have focused on whether personal religious beliefs (e.g., belief in God; seeing religion as particularly important in one's life), religious practices (e.g., personal prayer, attendance at religious services), or religious peers and family members affect adolescent drug use. Some evidence suggests that all these factors are negatively associated with cigarette, marijuana, and cocaine use, although these factors are not as influential as the family and peer factors discussed earlier.

At the aggregate level, studies suggest that attending schools with a higher concentration of religious adherents decreases the likelihood of drug use. In addition, belonging to a religious denomination that specifically prohibits certain forms of drug use, such as cigarette smoking, diminishes the probability of use.

Another way of viewing the potential influence of religion is to consider whether individual-level effects are amplified or buffered by aggregate level effects. The *moral communities* hypothesis, for example, proposes that the influence of personal religiousness is efficacious only when it is supported by community- or school-level religious norms or beliefs. In particular, proponents of this view argue that religious beliefs and practices decrease the risk of adolescent drug use primarily in communities that have a high concentration of members who share religious beliefs and practices but are less influential in more secular communities. Research has found inconsistent results, although at least two studies suggest that religious adolescents who attend high schools with many religious students are at particularly low risk of drug use.

Finally, community influences have a modest effect on adolescent drug use. Communities experiencing high unemployment, more transience, or a lack of communal trust in neighbors may provide poorer social environments for adolescents, thus increasing the risk of drug use.

## TRENDS IN ADOLESCENT DRUG USE

Two large national surveys in the United States serve as the basis for studying trends in adolescent drug use. The *Monitoring the Future* (MTF) program, conducted by researchers at the University of Michigan, is a series of national surveys of high school and junior high students that have been completed annually since 1975 (see, for example, Johnston, O'Malley, Bachman, & Schulenberg, 2007). The *National Survey of Drug Use and Health* (NSDUH) (formerly known as the *National Household Survey on Drug Abuse* or NHSDA), conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), has collected national surveys of U.S. residents, ages 12 and older, periodically since the early 1970s (see, for example, Office of Applied Studies, 2007). Identifying historical trends in adolescent drug use before the 1970s is difficult because consistent and rigorous surveys were not conducted; however, most experts agree that the 1960s was a period of increasing

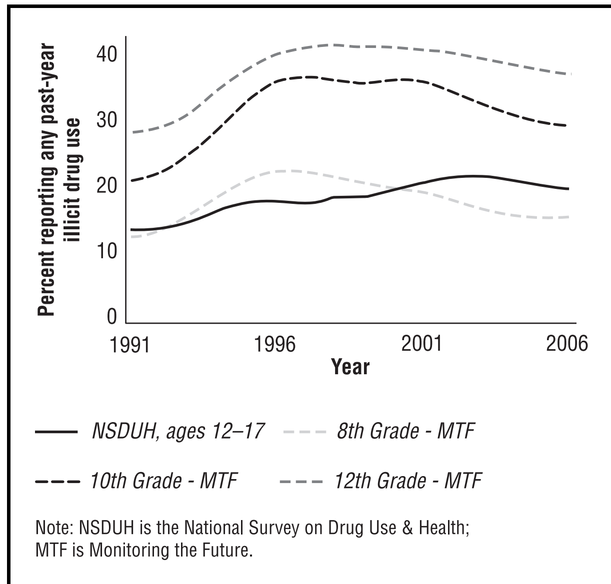


***Figure 1.*** *Trends in any past-year adolescent drug use.* CENGAGE LEARNING, GALE.

experimentation with illicit drugs such as marijuana and hallucinogens.

The MTF and NSDUH surveys show a similar ebb and flow of drug use since the 1970s, with similar trends across drug types. However, certain forms of drug use have become more or less popular across the years. The highest level of adolescent drug use occurred in the late 1970s and has since decreased. The most dramatic decrease has occurred for cigarettes; the prevalence of use has decreased continually since the late 1970s. However, there has also been an increase in the use of prescription-type drugs such as the painkiller hydrocodone, many of which are diverted and sold in the so-called *gray market*.

Since the early 1990s, adolescent drug use increased and then decreased for some groups. For example, Figure 1 shows the percentage of adolescents who reported any illicit drug use in the past year from 1991 through 2006 based on three groups of students from the MTF surveys and those ages 12 to 17 years from the NSDUH. In the MTF, levels of use increased through the late 1990s and have since decreased slightly. However, the NSDUH shows a leveling off in the mid-2000s. (Note: The lines in the graphs represent smoothed running averages to minimize the influence of random fluctuations from year to year.)

Trend analyses, such as those that involve emergency department admissions and drug users seeking treatment, suggest that some types of drugs have increased in both popularity and in presenting problems for adolescents. These include the so-called *club drugs* such as methylenedioxymethamphetamine (MDMA, or ecstasy), gamma hydroxybutyrate (GHB), and flunitrazepam (“roofies”). However, the prevalence of use is low enough in general population surveys to make conclusions about long-term trends highly unstable.

## CONSEQUENCES OF ADOLESCENT DRUG USE

Several studies have examined the short- and long-term consequences of adolescent drug use. Although most adolescents who use drugs quit using by young adulthood and do not suffer any negative consequences, a minority either continues to use or are at heightened risk of developmental problems or disrupted life-course milestones. The causal patterns or effects are not clear, yet strong correlational evidence suggests that heavier forms of drug use and abuse negatively affect normal development in adolescents.

Some specific findings from longitudinal research are that: (a) heavy drug use impairs educational milestones, with an increased risk of school drop-out, truancy, and poor school performance; (b) drug use is associated with precocious sexual experimentation, teenage pregnancy, and a higher risk of sexually transmitted diseases; (c) illicit drug use that continues from adolescence into adulthood is associated with higher levels of occupational turnover, including a heightened risk of being fired or of multiple job quits; and (d) heavier users of marijuana and other illicit drugs tend to be more involved in delinquency and criminal behavior and experience more arrests and mental health problems in early adulthood.

## FUTURE RESEARCH ON ADOLESCENT DRUG USE

Adolescent drug use remains an important topic for research because it continues to be a common behavior among young people. For many adolescents, drug use is a temporary and quite benign behavior that has few long-term consequences. Nevertheless, identifying who is at highest risk of experiencing problems remains an important issue. Moreover, there is a need to expand research attention to the comorbidity of drug use problems and mental health problems, the genetic bases of dependence and abuse, and the long-term developmental consequences of drug use for young, middle, and older adults.

SEE ALSO Volume 1: *College Culture; Drinking, Adolescent; Health Behaviors, Childhood and Adolescence; Peer Groups and Crowds; School Culture; Theories of Deviance;* Volume 2: *Health Behaviors, Adulthood;* Volume 3: *Health Behaviors, Later Life.*

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***John P. Hoffmann***

# E

## EATING DISORDERS

To say that the pervasiveness of eating disorders in the United States is distressing may be an understatement. The incidence rates for eating disorders range from no fewer than 8 per 100,000 persons in the general population per year for anorexia nervosa to 12 or more incidences for bulimia nervosa. Incidence rates for those most at risk are even higher. One study found an incidence rate for anorexia nervosa to be in excess of 70 per 100,000 females ages 15 to 19 (Lucas, Crowson, O'Fallon, & Melton, 1999). Even more startling is the mortality rate. Persons with anorexia nervosa are more likely to die than persons with any other psychiatric disorder. However, studies on comorbidity show that persons suffering from anorexia nervosa and other eating disorders often suffer from anxiety disorders as well, including obsessive–compulsive disorder and social phobia, the onset of which often occurs prior to an eating disorder. Thus it may be inaccurate to say that anorexia nervosa is the only causal factor in the mortality rates of these individuals. Having said that, the cause of death most commonly associated with persons with anorexia nervosa is suicide (Birmingham, Su, Hlynsky, Goldner, & Gao, 2005). This, coupled with the fact that those most at risk for anorexia nervosa are girls ranging in age from 14 to 18 years old, makes understanding and studying eating disorders even more critical (Keel, 2005). The National Institute of Mental Health agrees and in 2005 provided more than $20 million for research on eating disorders (Chavez & Insel, 2007a).

### DEFINITIONS

Eating disorders are psychiatric diagnoses. Therefore official definitions found in the American Psychiatric Association's *Diagnostic and Statistical Manual for Mental Disorders* (Fourth Edition, text revision [*DSM–IV–TR*]; American Psychiatric Association [APA], 2000) must be understood.

To be clinically diagnosed with anorexia nervosa, a patient must: be underweight; be fearful of being fat; view his or her body from a distorted perspective; and, for women, experience amenorrhea, or the absence or cessation of one's menstrual periods (APA, 2000). To be underweight is to weigh 85% or less than the minimally defined acceptable weight for one's height and age. For example, if guidelines suggest that a person should weigh at the minimum 100 pounds, then weighing 85 pounds or less would constitute an underweight individual. Being afraid of becoming fat even if one is underweight and seeing one's body from a distorted perspective characterizes the second and third criteria for anorexia nervosa. Finally, women who should be menstruating but have not done so for three menstrual cycles are experiencing amenorrhea (APA, 2000). There are two subtypes of anorexia nervosa: restricting type and binge-eating/purging type. These subtypes allow clinicians to specify whether an individual also engages in binging and purging behaviors in addition to anorexia nervosa symptoms.

Bulimia nervosa is characterized by eating an excessive amount of food, lacking self-control during a binge, and then responding to the guilt associated with the overeating by engaging in compensatory behavior such as vomiting, fasting, or overexercising (APA, 2000). A binge is defined as eating more food than most ordinary people would consume within a specific time period under comparable circumstances while at the same time feeling at a loss of control over one's behavior. The *DSM–IV–TR* criteria states that for a diagnosis of

bulimia nervosa, the binge eating and purging or nonpurging compensatory behavior must occur at least twice over the course of each week for a period of 3 months. The *DSM–IV–TR* also identifies poor body image influencing feelings of self-worth as a diagnostic criterion.

As with anorexia nervosa, the *DSM–IV–TR* also distinguishes two subtypes of bulimia nervosa: purging type and nonpurging type. These subtypes discern between patients who vomit or use laxatives (purge) and those who employ nonpurging behaviors such as overexercising or fasting to compensate for overeating.

Anorexia nervosa and bulimia nervosa are probably the most widely recognized eating disorders, but they are not the most pervasive. Eating disorder not otherwise specified (EDNOS) is the most frequently diagnosed eating disorder (Machado, Machado, Gonçalves, & Hoek, 2007). The prevalence rate of EDNOS diagnosis among adults in treatment for eating disorders is estimated at 60% (Fairburn & Bohn, 2004). This diagnosis is a catchall term for those who do not meet the complete clinical definition for either anorexia nervosa or bulimia nervosa. For example, if a woman meets all of the criteria of anorexia nervosa but by definition is not underweight or is still menstruating, she will be diagnosed as EDNOS. In the same manner, a man who eats an extraordinary amount of food, similar to a person with bulimia nervosa, but does not engage in inappropriate behavior to rid his body of the calories will be diagnosed as EDNOS. In this latter case, the man will be classified with binge-eating disorder, a condition that falls under EDNOS in the *DSM–IV–TR* (APA, 2000).

Prior to clinical diagnosis, friends and family members may look for warning signs if they suspect a loved one has an eating disorder. These may include but are not limited to being preoccupied with food or weight, being secretive about eating, avoiding social situations with food, and engaging in out-of-the-ordinary rituals with their food. In addition, a person with an eating disorder may express mood shifts or may dress in layers to hide weight loss (Ciotola, 1999). The medical consequences associated with eating disorders can be life threatening. Complications from eating disorders can range from constipation and tooth decay to infertility and cardiac problems (Rome & Ammerman, 2003).

## HISTORICAL PERSPECTIVE

Evidence of self-starvation can be traced back to ancient civilizations in Egypt and Greece. Similarly, many historical religious accounts mention fasting rituals as a way to enhance prayer. Bell (1985) recounted the lives of saints throughout history such as Saint Catherine of Siena (1347–1380), who refused to eat, and he termed this behavior *holy anorexia*. The "discovery" of anorexia nervosa, however, is usually credited to William Gull, a prominent British physician, who first published a paper on anorexia nervosa in 1874 (Keel, 2005). Some authors credit not only Gull but also a lesser known French psychiatrist, Ernest-Charles Lasègue, who, working independently of Gull, published his own writings on anorexia in the year 1873.

In contrast to anorexia nervosa's long documented history, bulimia nervosa has a much more recent discovery. Research on this disorder first appeared in a 1979 article in the journal *Psychological Medicine* by Gerald Russell. In this paper Russell introduced the reader to patients who, like those with anorexia nervosa, are fearful of being fat but instead of starving themselves overeat and then purge. Following Russell's article, research on bulimia nervosa flourished, as did media attention to this disorder. The 1980s also saw a marked increase in the number of persons seeking treatment for bulimia nervosa (Theander, 2002).

## THE STUDY OF EATING DISORDERS

The spectrum of research on eating disorders is impressive. Some studies explore genetic and neurobiological factors associated with eating disorders, whereas others focus on the outcomes of various treatments options, including pharmacological and psychosocial therapies (Chavez & Insel, 2007a). Other studies explore how family environments influence eating disorders (Laliberté, Boland, & Leichner, 1999), whereas still others observe eating disorders as a social problem. For example, Hesse-Biber, Leavy, Quinn, and Zoino (2006) argued that eating disorders are caused in part by economic and social causes: Media, diet, fitness, plastic surgery, and other industries both promote and profit from society's culture of thinness ideal.

Eating disorders research is as pertinent as ever, as scholarly journals such as *Eating Disorders: The Journal of Treatment and Prevention*, *International Journal of Eating Disorders*, and *European Eating Disorders Review* are dedicated entirely to the publication of studies on eating disorders. Discipline-specific journals, such as *American Psychologist*, have also recognized the importance of adding to the state of knowledge of anorexia nervosa, bulimia nervosa, and EDNOS and have dedicated entire issues to the special topic of eating disorders.

Limitations nevertheless exist within the research on eating disorders. One of the most disconcerting disparities has been the lack of diversity in the study populations. Despite the popular notion that eating disorders affect only White middle-class women, evidence suggests that eating disorders do not discriminate and are found to exist across racial and ethnic groups (Franko, Becker,

Thomas, & Herzog, 2007). In spite of this finding, very little research on eating disorders has focused on girls and women of color (Smolak & Striegel-Moore, 2001). This is problematic in both a theoretical and an applied sense. As a result of the lack of research on diverse populations, clinicians, health care professionals, and others on the front lines of detecting eating disorders are dismissing or misinterpreting eating disorder symptoms in patients of color. Studies show that racial and ethnic minorities are less likely than White patients to be asked by their health care providers about eating disorders and are not being referred for treatment to the same degree (Becker, Franko, Speck, & Herzog, 2003).

Once in treatment, racial and ethnic minority patients may face additional biases because many treatment and prevention programs do not take into account the diversity of experiences and are instead targeted primarily at White women's experiences (Smolak & Striegel-Moore, 2001). This is important to consider, as evidence suggests that how eating disorders manifest themselves may vary among different racial and ethnic populations. One study found significant variation in eating disorders symptoms among different ethnic groups, revealing the greatest frequency of laxative use among Native Americans and the least usage of diuretics among Asians. (Franko et al., 2007). Another study examined differences among Black and White women diagnosed with binge-eating disorder and found variation in frequency of binging and concern for body image and weight (Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001).

## FUTURE RESEARCH AREAS ON EATING DISORDERS

Future research on eating disorders will continue to explore diverse populations including not only racial and ethnic minorities but also men and gay, lesbian, bisexual, and transgender populations. The study of eating disorders will also expand to include more research on women who experience eating disorders later in life.

Research on eating disorders in men indicates a relationship between sexual identity and eating disorder behaviors: Gay and bisexual men are more likely than heterosexual men to develop an eating disorder (Feldman & Meyer, 2007). Early discussions on lesbian women and eating disorders suggests that lesbians may be immune to the unrealistic beauty ideals of a patriarchal society because they are not interested in attracting male partners. More recent data indicates, however, that lesbian and bisexual women suffer from eating disorders much like heterosexual women (Feldman & Meyer, 2007). Future studies will continue to explore the differences in lesbian, bisexual, and heterosexual women's experiences with eating disorders.

Some researchers (e.g., Forman & Davis, 2005) are responding to the need to study eating disorders within an older population of women who may experience similar symptoms but have different causes than younger women. Research suggests that reasons for middle-age women's dissatisfaction with their body image are likely related to the body changes associated with aging. Diagnosis and treatment may also pose different issues for middle-age women than younger women. For example, family counseling for younger women may include parents, whereas support for middle-age women is more likely to come from a partner (Forman & Davis, 2005).

Finally, the future of research on eating disorders is likely to address the influence of the Internet. In addition to numerous other concerns with the Internet, researchers are turning their attention to proanorexia (pro-ana) and probulimia (pro-mia) web sites. These web sites provide a forum for visitors to share tips and tricks, "thinspirations," photos of thin celebrities, and other secrets in an effort to promote an eating disorder lifestyle. Anna Bardone-Cone and Kamila Cass (2007) conducted one of the first experiments on the impact of viewing a pro-anorexia web site. College women who visited the pro-anorexia web site were more likely to exhibit body dissatisfaction and lower self-esteem than their counterparts who visited a fashion or a home decor web site. They were also more likely to exercise after their experience with the pro-anorexia web site. Further research on the influence of these web sites on eating disorders is sure to follow.

## DSM–V

In 2007 the *International Journal of Eating Disorders* dedicated a supplemental issue of their journal to a discussion of the future of eating disorders in preparation for the forthcoming (2012) publication of the *DSM–V*. The contributors to this issue recognized the importance of diagnostic criteria for treatment and other outcomes and raised important questions and concerns. Chavez and Insel (2007b), for example, asked if amenorrhea is a necessary criterion for diagnosing anorexia nervosa. They also called attention to how a binge in bulimia nervosa is operationalized. The classification of EDNOS was also noted as worthy of discussion given the prevalence of its diagnosis. Within this discussion of EDNOS, attention to binge-eating disorder, the most commonly assigned category of this diagnosis, is relevant as well (Chavez & Insel, 2007b). In any case, the discussion and study of eating disorders promises to continue and develop over time.

**SEE ALSO** Volume 1: *Body Image, Childhood and Adolescence; Mental Health, Childhood and Adolescence; Obesity, Childhood and Adolescence; Puberty; Socialization, Gender;* Volume 2: *Obesity, Adulthood.*

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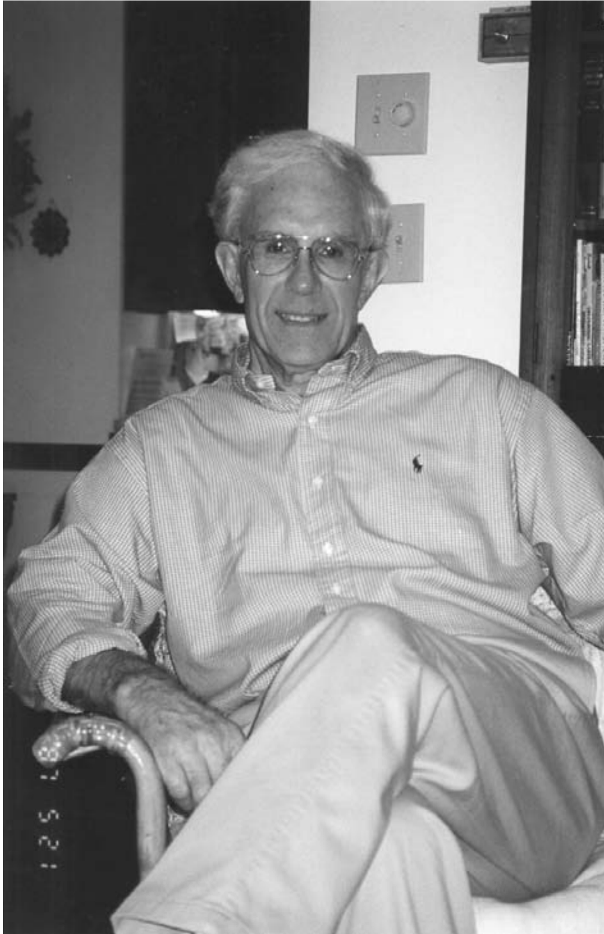
***Michelle Napierski-Prancl***

# ELDER, GLEN H., JR.

***1934–***

Glen H. Elder Jr. (born in Cleveland, Ohio), a U.S. sociologist, is the primary architect of the life course perspective on human development, which has had an immense influence on scientific research in sociology, psychology, and other disciplines. The basic parameters of this theoretical perspective emerged from Elder's own investigations of the ways in which children, adults, and the elderly chart out their lives over time within the constraints imposed by their environments, social positions, and historical circumstances.

Biography within context is one of the core themes of life course research. Fittingly, Elder's own personal history sheds light on his scientific accomplishments. He was raised in Cleveland and its suburbs by his parents, who were high school teachers and athletic coaches. As a teenager, he moved with his family to a dairy farm in Pennsylvania so that his father could pursue a lifelong dream of working the land. From there, Elder moved on to Pennsylvania State University, where he received his bachelor's degree (1957) and also met his wife. He then attended the University of North Carolina–Chapel Hill, where he earned a Ph.D. in sociology (1961). His first faculty position was at the University of California, Berkeley, where he realized the value of studying how people were affected by the rapid, dramatic changes of modern society and where he began his pioneering work on archived longitudinal samples of young people born in the early 20th century. After moving with his wife and three sons several more times to take on new professional appointments, most notably at



***Glen H. Elder.*** **PHOTO COURTESY OF GLEN H. ELDER.**

Cornell University in Ithaca, New York, and then to Boys Town in Nebraska, Elder returned to the University of North Carolina in 1984 as the Howard W. Odum Distinguished Professor of Sociology, a position that he held until his official retirement in 2007. Along the way, Elder served as the president of the Society for Research in Child Development and vice president of the American Sociological Association, and as a fellow in the Sociological Research Association, American Psychological Association, and the Gerontological Society of America. He was elected to the American Academy of Arts and Sciences in 1988.

Elder's work at the Institute of Human Development at Berkeley resulted in what is arguably his greatest scholarly achievement: *The Children of the Great Depression*. This book, first published in 1974, reported on the adjustment of young Californians who came of age during the trying economic times of the Depression era (1929–1939). These youth had participated in two longitudinal studies of psychological development before Elder was born. By pure happenstance, these studies spanned the Great Depression. Elder retrieved, organized, and coded these historical data and then analyzed the resulting data set with a special emphasis on the changing economic circumstances of the children's families. The enduring, hopeful message of this study is that children are amazingly resilient in the face of early economic adversity.

What is notable about this work was that it situated children's development within larger social contexts, not just in their families or their communities, but also in the structure of U.S. society (e.g., the class system) as well as particular historical eras. That doing so now seems self-evident is a testament to the influence of this study. At the time, this approach was groundbreaking. This book served as the genesis of life course theory, which Elder has been refining ever since. This theory orients researchers toward asking specific kinds of questions when they design studies dealing with human lives and then provides tools for helping them interpret the findings of these studies.

Life course theory has five basic principles:

1. Life-Span Development: Human development and aging are lifelong processes.
2. Agency: Individuals construct their lives through the choices and actions they take within the opportunities and constraints of history and social circumstance.
3. Time and Place: The life course of individuals is embedded and shaped by the historical times and places they experience over their lifetime.
4. Timing: The developmental antecedents and consequences of life transitions, events, and behaviors vary according to their timing in a person's life.
5. Linked Lives: Lives are lived interdependently and sociohistorical influences are expressed through this network of shared relationships.

These principles are evident in Elder's later works, including more than a dozen books and hundreds of journal articles. As one example, he performed a similar reconfiguration of another historical, longitudinal data source—the Stanford-Terman study, which has followed a group of intellectually gifted children for more than 80 years—to assess the long-term impact on men's lives of having served during World War II (in the United States, 1941–1945). More recently, he joined with sociologist Rand Conger (Iowa State University) to conduct a decade-long study of farm families living through the collapse of the agricultural economy in Iowa in the 1980s. In both cases, Elder has driven home the simple but all important idea that human lives are lived in time and place.

**SEE ALSO** Volume 1: *Clausen, John; Data Sources, Childhood and Adolescence; Parent-Child Relationships, Childhood and Adolescence; Poverty, Childhood and Adolescence;* Volume 2: *Agency;* Volume 3: *Cohort.*

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***Robert Crosnoe***

## ELEMENTARY SCHOOL

**SEE** Volume 1: *Stages of Schooling.*

## EMPLOYMENT, YOUTH

Employment is increasingly recognized as an important developmental context of adolescence, one that may operate alongside or in conjunction with families, schools, and friendship groups. Adolescent employment is also a topic of great interest to educators and policy makers, who, along with parents, want to ensure that adolescents are adequately prepared for adult roles. Of particular concern is how investments in employment stand in relation to education in facilitating a successful transition into meaningful and financially rewarding work in adulthood. Government policy regulates adolescent employment as to the hours and times of day teens may work, as well as prohibiting work deemed too dangerous for youth. Policy efforts have also been aimed at helping economically disadvantaged youth gain work experience that facilitates their transition from school to work.

### PREVALENCE AND HISTORICAL TRENDS

Nearly all high school students are employed at some point during the school year (U.S. Dept. of Labor, 2000; Entwisle, Alexander, & Olson, 2000). Summer employment is more common than school-year employment (Perreira, Harris, & Lee, 2007), though nearly all research on adolescent employment is concerned with school-year employment.

Employment of teens enrolled in school became more common in the period between the 1940s and the 1980s, though it has been largely stable since then (Greenberger & Stenberg, 1986; Warren & Cataldi, 2006; for a discussion of earlier situations, see Mortimer, 2003). The hours adolescents typically spend in paid work have been stable historically (Warren & Cataldi, 2006). A key to understanding employment trends among students, however, is to remember the trend of rising school enrollment. Warren and Cataldi (2006) make an important distinction between adolescent and student employment, clarifying the source of this apparent growth in student employment before 1980. In their analysis of Whites and Blacks between 16 and 17, they found that rising employment among boys stemmed from a decline in the proportion of adolescent boys who worked but who were not enrolled in school. They conclude that the trend among boys "should be seen as a trend toward greater rates of school enrollment among employed men" (p. 119). Among girls, the rise in employment through 1970 largely stemmed from a decline in the proportion of girls neither working nor enrolled in school (e.g., young homemakers). After 1970, however, rising student employment among girls involved more students working.

### PATTERNS OF EMPLOYMENT ACROSS ADOLESCENTS

Employment becomes more common with age. Estimates from national surveys vary some, in part based on whether adolescents are asked about current employment or typical school-year employment. In the Monitoring the Future surveys, 36% of girls and 41% of boys in eighth grade, 38% of girls and 45% of boys in tenth grade, and 68% of both boys and girls in twelfth grade report school year employment (Safron, Schulenberg, & Bachman, 2001). Estimates by age from the National Longitudinal Survey of Adolescent Health show a similar pattern (Perreira et al., 2007). Although most studies involve high school students, the adolescent work career often starts earlier (Entwisle et al., 2000; Mortimer, 2003).

With advancing age, adolescents tend to work more hours per week, and the type of work they do changes (Steinberg & Cauffman, 1995; Mortimer, 2003). Estimates from the Monitoring the Future study indicate that of those working for pay, 15.6% of girls and 24.4% of boys in the tenth grade, and 37.7% of girls and 44.3% of boys in twelfth grade work more than 20 hours per week (Safron, Schulenberg, & Bachman, 2001). As they mature, teens move from largely informal work (e.g., babysitting and yard work) into formal employment, and the tasks they do become more complex (Steinberg & Cauffman, 1995; Mortimer, 2003; Entwisle, Alexander, & Olson, 2005). Older teens most commonly work as restaurant staff and retail store clerks

***Food Service.*** *A manager and an employee at Boston Market discuss how many chickens should be roasted.* © ERIK FREELAND/CORBIS.

(Steinberg & Cauffman, 1995), although they are also represented in a range of other jobs (Mortimer, 2003).

Since the 1980s, girls have been equally likely to be employed, though among workers boys tend to work more hours per week than girls (Schoenhals, Tienda, & Schneider, 1998; Warren & Cataldi, 2006; Perreira et al., 2007). Studies consistently find that Black and Hispanic adolescents are less likely to be employed than non-Hispanic white adolescents, though among workers they tend to work the same number or slightly more hours per week (D'Amico, 1984; Bachman & Schulenberg, 1993; Steinberg & Cauffman, 1995; Schoenhals et al., 1998; Warren & Cataldi, 2006). First- and second-generation immigrant adolescents are also considerably less likely to work than third-generation adolescents, owing in part to differences in work participation by race/ethnicity (Perreira et al., 2007). Finally, although many studies find no major differences in paid work participation by socioeconomic background, some evidence suggests that employment is lower among adolescents from very poor and from very wealthy families (Steinberg & Cauffman, 1995; Schoenhals et al., 1998). In contrast, the average number of hours worked among employed students is consistently related to socioeconomic status. Students from families with higher socioeconomic status work fewer hours per week (Bachman & Schulenberg, 1993; Schoenhals et al., 1998).

## POTENTIAL BENEFITS AND RISKS

Adolescent employment holds the potential for both beneficial and detrimental consequences in both the short and longer terms. From one point of view, employment provides important socializing experiences in preparation for adulthood. Mortimer (2003), for example, noted that paid work introduces adolescents to the world of work, allowing them to gain experience and develop foundational skills. Based on a similar rationale, a series of national commissions have extolled the benefits of working during adolescence (e.g., National Commission on Youth, 1980; Panel on Youth, 1974). Through paid work, adolescents would learn responsibility, the value of money, and practical skills that would be useful in their adult jobs. Mortimer further notes that even jobs that adolescents do not expect to hold as adults may stimulate thinking about one's occupational future and help young people learn how to balance school and work in a way that facilitates later attainment.

Conversely, scholars and educators have worried that paid work detracts from important educational pursuits, including studying, participation in extracurricular activities, and regular attendance at school. This argument usually assumes a zero-sum model in which an hour adolescents spend at work is an hour less to spend on other important tasks. Concerns have been raised about whether time in paid work also competes with time allotted to developmental processes of importance during adolescence including self-discovery and the development of autonomy and social responsibility. Greenberger and Steinberg (1986) have argued this position, for example, and suggested that employment during adolescence promotes *pseudomaturity*—that is, social maturity gained through the worker role, but without psychological maturity. They have also suggested that the poor quality of contemporary teens' work experience fosters negative attitudes toward work, encourages workplace deviance, and heightens the use of alcohol and drugs to cope with workplace stress. Additional concerns have been raised about the safety of adolescent workers (e.g., NRC, 1998) and whether employment weakens parental authority and exposes young workers to somewhat older peers who are more likely to drink and use other drugs (e.g., McMorris & Uggen, 2000).

Scientific evaluation of these arguments began in earnest in the 1980s. Research over the past several decades offers evidence with which parents, educators, and policymakers can weigh the costs and benefits of paid work in adolescence. Most of that research has focused on employment status and the number of hours adolescents work rather than the nature of their work.

Consistent with the view that paid work is developmentally beneficial, studies have shown that hours worked in high school are linked to higher rates of labor force participation, lower unemployment, and higher earnings in young adulthood (Marsh, 1991; Carr, Wright, & Brody, 1996; Mortimer, 2003). For girls, employment is also associated with gains in self-reliance (Greenberger & Steinberg, 1986) and greater knowledge of the work world (D'Amico, 1984).

Fueling concerns over the risks of employment, however, studies also find that work hours are associated with cigarette, alcohol, and other drug use (Steinberg & Dornbusch, 1991; Bachman & Schulenberg, 1993; McMorris & Uggen, 2000; Mortimer, 2003; Pasternoster, Bushway, Brame, & Apel, 2003), delinquency and related problem behaviors (Marsh, 1991; Steinberg & Dornbusch, 1991; Bachman & Schulenberg, 1993; Pasternoster et al., 2003), poorer health behaviors such as missing sleep, skipping breakfast, and less frequent exercising (Bachman & Schulenberg, 1993), more time in unstructured social activities such as recreation, dating, and riding around for fun (Safron, Schulenberg, & Bachman, 2003), and poor academic performance, including lower grades and educational aspirations, less time doing homework, and higher rates of absenteeism and school drop out (D'Amico, 1984; Marsh, 1991; Steinberg & Dornbusch, 1991; Bachman & Schulenberg, 1993; Warren & Lee, 2003).

Some of these relationships are nonlinear, however, and indicate that moderate employment offers benefits over, or is at least equivalent to, not working. Those who work only a few hours (i.e., 1–5 per week) get more sleep, and are more likely to eat breakfast and to exercise more often than those not working, and those working between 6 and 10 hours behave in much the same way on these dimensions as those not working (Bachman & Schulenberg, 1993). Moderate work hours have also been linked to positive academic outcomes including higher grades (Steinberg & Dornbusch, 1991; Mortimer, 2003), more time doing homework (Steinberg & Dornbusch, 1991), more time spent in school activities (Safron et al., 2003) and equivalent or lower rates of dropping out of high school (D'Amico, 1984; Warren & Cataldi, 2006). As a result, much of the attention has shifted to *intensive* employment, usually defined as working more than 20 hours per week.

As research in this area has matured, two observations have shaped the way in which adolescent employment is understood: (a) that it might not have the same effects for all groups of adolescents, and (b) that students who do work, and do so at varying intensities, differ beforehand in many ways, which could explain why working is correlated with the various benefits and risks already noted in this entry.

**Varying Effects** Evidence is growing that the effects of working depend on various adolescent characteristics, including whether earnings are being saved for college (Marsh, 1991) or are being used to support oneself or one's family (Newman, 1996), racial or ethnic group membership (Johnson, 2004), and whether a student is likely to go onto higher education (Entwisle et al., 2005). For example, important tangible benefits of paid work may exist, and there may be less to lose, for youth who find little appeal in higher education or do not have the money to pursue it. The effects of working may also be conditional on adolescents' developmental histories. Apel and colleagues (2007) found that the effects of moving into intensive work hours for the first time at age 16 on substance use and criminal activity depends on adolescents' earlier trajectories with respect to these behaviors. In particular, they find that heavy work involvement may be of benefit to some at-risk youth.

**Selection Processes** Importantly, although the research discussed in this entry shows that employment, and more often work intensity, in adolescence is associated with a great many aspects of adolescent behavior and well-being, little agreement exists on whether working has a causal effect on these outcomes. Most critical is a concern about whether these relationships may be spurious, owing to preexisting differences among students in socioeconomic background, academic ability, motivation, work orientations, and other characteristics. Similarly, the causal order may be reversed, such that students with lower grades, who use alcohol and other drugs, and who get into trouble seek out employment at higher intensities as an alternative arena in which to succeed or as a source of income to support their desired lifestyles. It has also been suggested that both working longer hours and behaviors such as substance use are manifestations of an underlying syndrome—that one does not necessarily cause the other (Bachman & Schulenberg, 1993).

In response to concerns about whether employment or work hours has causal effects on behavior, well-being, and later attainment, studies have taken youths' selection into employment of varying intensities more seriously over time. Most studies find that adjusting for covariates greatly reduces or eliminates the association between work hours and the outcome of interest. For example, by adjusting for pre-existing differences among students, scholars have shown that the relationships between work hours and both grades and homework time is spurious (Schoenhals et al., 1998; Warren, LePore, & Mare, 2000).

Even adjusting for covariates, however, studies do find a robust association between work hours and higher substance use (McMorris & Uggen, 2000; Pasternoster et al., 2003), school dropout (Warren & Lee, 2003), and absenteeism (Schoenhals et al., 1998), but also that steady, moderate, work hours are related to higher educational attainment (Mortimer & Johnson, 1998), especially among young people with low educational promise (Staff & Mortimer, 2007).

Other approaches to addressing selection processes are emerging. Using propensity score matching, Lee and Staff (2007) find the effect of intensive employment and school drop out is not totally spurious. However, among those with a high propensity to work intensively, who tended to be from families with lower socioeconomic status and to have weaker school performance and lower chances for postsecondary education, work hours had no effect on the likelihood of drop out. Using fixed and random effects models to adjust for unobserved heterogeneity among students, Pasternoster and colleagues (2003) find the relationship of work intensity with delinquency, substance use, and problem behaviors is spurious.

## FUTURE DIRECTIONS

Future research on adolescent employment will inevitably continue to grapple with the question of causality. Continued attention to methods for addressing observed and unobserved differences prior to employment is needed.

Signs are accumulating that more attention is being paid to the nature of the work adolescents do, and not only to the hours they put in. Despite repeated calls to consider this issue, until very recently, only a few studies considered what work adolescents were performing. Mortimer (2003) provides one of the most comprehensive analyses of the precursors and consequences of the quality of work experiences. Moreover, she demonstrates that questions about work hours and the nature of the work experience are inextricably linked. For example, the temporal pattern of investment in work across the high school years is related to adolescents' assessments of their work, with those that worked longer hours experiencing greater learning opportunities, but also having more demanding and stressful jobs.

With the same panel, Staff and Uggen (2003) find that characteristics of *good* adult jobs, like autonomy, status, and pay, are not necessarily good for adolescents. They found adolescent autonomy was associated with increased school deviance, alcohol use, and probability of arrest. Jobs that promote status with peers were also associated with increased school deviance and alcohol use. Higher wage jobs were associated with an increased probability of arrest. In contrast, jobs that were perceived to be compatible with school were linked to decreased alcohol use and probability of arrest, and opportunities to learn on the job were associated with decreased alcohol use. Entwisle and colleagues (2005) also point to a gradual and orderly movement into formal work, levels of job stress, and using earnings for family support as important variants in adolescents' jobs when it comes to school completion. Based on these and related studies, our understanding of adolescent employment has become considerably more nuanced in the last few decades.

**SEE ALSO** Volume 1: *Academic Achievement; Drinking, Adolescent; Drug Use, Adolescent; Human Capital; Peer Groups and Crowds; Self-Esteem; Vocational Training and Education; School to Work Transition;* Volume 2: *Careers; Employment.*

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***Monica Kirkpatrick Johnson***

## ENGLISH AS A SECOND LANGUAGE

**SEE** Volume 1: *Assimilation; Bilingual Education.*

## ERIKSON, ERIK

***1902–1994***

Psychoanalyst Erik Homburger Erikson's two most important contributions are a theory of the life cycle showing the integration of personal development and social context from earliest childhood to oldest age and a theory of the development of identity in adolescence based on earlier childhood experiences. Born in Frankfurt, Germany, on June 15, the illegitimate son of a brief affair by his affluent Danish mother, Erikson was adopted by his mother's second husband, pediatrician Theodor Homburger. Following his mediocre career in a classical secondary school

*Joan and Erik Erikson.* TED STRESHINSKY/TIME LIFE PICTURES/GETTY IMAGES.

(a school emphasizing study of Greek and Latin, together with European history) and late adolescence wandering about Germany, periodically studying art and searching for his own identity, he was invited by a childhood friend to join him teaching in a school in Vienna that was primarily for children who were in analysis with pioneering child analyst Anna Freud (1895–1982). After seeking a personal analysis with Miss Freud and completing formal psychoanalytic education at the newly created Vienna Psychoanalytic Institute, Erikson and his family left Vienna for the United States following Adolf Hitler's rise to power in 1933.

With his impressive Viennese psychoanalytic credentials, and a gift for child psychoanalysis, even though he had no formal university education, Erikson had little difficulty securing research appointments in a number of developmental and psychological studies, first at Harvard University, then at Yale University and later at the University of California, Berkeley. During this time he took part in two ethnographic projects, studying the Native American Sioux tribe of the Plains while at Yale and then the Yurok of the Northwest Coast while at Berkeley. After consulting with his family, Erikson changed his name from Homburger to Erikson when he became a U.S. citizen in 1939. Erikson was uncomfortable with empirical American developmental psychological study and the American research university as a setting for his own work. He was diffident in relations with his colleagues, and resentful of the time away from his own writing, including papers that eventually became the chapters of *Childhood and Society* (1950) and several significant psychoanalytic papers.

Erikson accepted an appointment to the Austen Riggs Center of Stockbridge, Massachusetts, which was devoted to the study and treatment of psychological disorders, and somewhat later served as a professor at Harvard, where at middle age he taught his first university courses including a very popular undergraduate survey of his work. Retiring in 1970, Erikson earned a Pulitzer Prize and a National Book Award for his psychobiographical study of the South Asian charismatic leader Mohandas Gandhi. Erikson died on May 12 in the Cape Cod, Massachusetts, community where he had spent his last years as his health declined, surrounded by his wife, Canadian-born Joan, and his two sons and a daughter.

Much of Erikson's work built on and expanded earlier work of Sigmund Freud, especially Freud's argument that biologically based drives across the first years of life are a powerful determinant of personality and the foundation for a child's effort to resolve conflicts regarding desire and rivalry with the parents during the preschool years. Erikson accepted Freud's emphasis on a psychological development as cumulative or epigenetic. Freud had maintained that the relative degree of satisfaction or frustration across the first years of life determined the manner in which subsequent developmental phases were experienced. Erikson maintained, however, that Freud had failed to realize the potential of this scheme for normal psychological development and had also failed to emphasize the social context of early psychological development. Further, Erikson held that Freud's perspective on personality development was important for developmental study from infancy through oldest age.

Erikson's portrayal of cumulative personality development emphasizes both the adaptive and the problematic outcomes for further psychological development related to each developmental stage. Maturational forces provide the impetus for the first three stages of trust versus mistrust (infancy), autonomy versus shame and doubt (toddlerhood), and initiative versus guilt (preschool years). Social forces become the impetus for later developmental stages including industry versus inferiority (elementary school years), identity versus role confusion

(adolescence), intimacy versus isolation (youth), generativity versus stagnation (the settled years of adulthood), and integrity versus despair (later life). Whereas Vaillant and Milofsky (1980) suggested that the adult life cycle is best portrayed as developmental tasks rather than stages, Joan Erikson maintained that a ninth stage dealing with very late life should be added to this account of the life cycle (Erikson & Erikson, 1997). Vaillant and Milofsky suggested that phases of the life cycle posed for adolescence and youth should include a separate subphase of career consolidation versus self-absorption and that of the adult years should include the generativity-related subphase concern of keeper of the meaning versus rigidity.

Erikson's other major achievement was a detailed discussion of adolescence and the issue of identity or the search for a sense of personal sameness or continuity in one's own life (Erikson, 1959/1980). Biographer Friedman (1999) has highlighted these themes in Erikson's life: his identity as an illegitimate Danish-born son who did not know his biological father and who as an adolescent wandered throughout Germany searching for meaning and coherence, and his changing his name when granted citizenship to reflect his Danish parentage. Founded on his clinical work and his biography of Martin Luther (1958), Erikson maintained that much of the psychological distress of his young patients had been misunderstood as major psychopathology when it was more likely the effort to resolve the identity conflict of adolescence and youth. Erikson (1959/1980) wrote a number of essays on youth and identity.

Erikson's portrayal of the life cycle has been criticized as culturally specific. Further, Erikson's emphasis on cumulative development does not permit recognition of the interplay of person and society over both time and place. Dannefer (1984) argued that both ontogenetic and life-span models of development should be replaced with a life course model that considers sociohistorical context, particularly one's birth cohort.

**SEE ALSO** Volume 1: *Cognitive Ability; Identity Development; Moral Development and Education.*

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***Bertram J. Cohler***

## EXTRACURRICULAR ACTIVITIES

**SEE** Volume 1: *Activity Participation, Childhood and Adolescence; Civic Engagement, Childhood and Adolescence; Sports and Athletics.*

# F

## FAMILY AND HOUSEHOLD STRUCTURE, CHILDHOOD AND ADOLESCENCE

The structure and composition of American families has changed dramatically since the mid-20th century. Around 1950, most American children were born into marital unions and about three-quarters remained in "traditional" nuclear families—defined as families with two biological parents married to each other, full siblings only, and no other household members—through childhood and adolescence. In the early 21st century, the family structure histories of American children are far more complex. Increases in nonmarital childbearing, divorce, and cohabitation, combined with declines in marriage and remarriage, have translated into more dynamic relationship histories for adults and more complex living arrangements for their children. Although snapshot estimates indicate that the majority of children live with both biological parents, life course estimates suggest that more than half of all children will spend some time living outside of a "traditional" nuclear family (Bumpass & Lu, 2000).

These changes are dramatic and have generated a large, multidisciplinary literature that has both documented family change and explored the implications of these changes for adults and, especially, children. These changes have also spilled into the national policy domain. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 was the first federal law to explicitly promote marriage and encourage the formation of two-parent families. This federal commitment continued into the 21st century. As part of the 2005 reauthorization of the Temporary Assistance to Needy Families program, the administration of George W. Bush expanded this legislation by providing additional money for programs aimed at increasing healthy marriages and two-parent families.

At the heart of both the research and policy initiatives is the question of whether the basic functions of the family—ensuring children's social and emotional adjustment and economic well-being in childhood and beyond—are compromised by changes in the structure and composition of the family. In other words, do deviations from the "traditional" family *cause* children to engage in more problem behaviors, do less well in or drop out of school, be more depressed, and ultimately fail to successfully transition to adulthood? This entry provides a general review of the literature that tries to address this question.

Before describing trends in family structure and their implications for children, it is important to note that the changes in the family have not occurred in a vacuum. Instead, they are a part of a larger set of changes in the nature of work, the economy, marriage, and gender roles (Bumpass, 1990). Between 1950 and the early 21st century, the U.S. labor market transitioned from a growing, largely manufacturing-based economy that offered a family wage to nearly all men and actively discriminated against women to a service-based economy that is less secure, is highly credentialed, and relies on the labor of women. At the same time, norms about gender roles and the importance of marriage (but not children) as well as expectations about personal happiness were realigned.

These changes, in turn, have transformed the structure and organization of the adult stage of the life course for contemporary American women and men. Moreover, although these changes have permeated all of American society, significant racial and ethnic differences in opportunities and constraints in the labor market have translated into important racial and ethnic differences in the structure of families. Together, these changes shape the normative context in which adults make decisions about romantic unions and in which children are raised (Casper & Bianchi, 2002).

## AN OVERVIEW OF CHILDREN'S FAMILY STRUCTURE STATUS

Providing an overview of children's family structure status must begin with a definition of the term *family*. Although this seems like a relatively straightforward task, as the current debate about gay marriage suggests, deciding who is in the family is a hotly contested issue in the United States. Like all social institutions, the family is socially constructed. But more than other institutions, the American family is imbued with rich social and cultural meanings. Any discussion of the family, especially as it relates to children, is often one about values—as they relate to kids but also to ideas about gender, marriage, economic stability, and individual well-being. Thus, coming up with a definition that incorporates cultural meanings and reflects the lived experience of children remains a challenging task.

The U.S. Bureau of the Census definition of the family provides a good starting point. The Census Bureau defines the family as "A group of two or more people who reside together and who are related by birth, marriage, or adoption."

A household, by contrast, includes one or more people who occupy a residential unit. By these definitions, a cohabiting couple—gay or heterosexual—is *not* a family, simply a household. Meanwhile, all families maintain a household. One indication of the many changes in family behavior can be indexed by the declining proportion of households that are made up of families and the increasing proportion composed of nonfamilies.

Based on this definition of family, a snapshot of U.S. families with children under 18 from 2005 indicated that about 71% lived in two-parent families, 23% lived in single-mother families, and 3% lived in single-father families. No parents were in the home of about 4% of all children. (Kreider & Fields, 2005). As a point of comparison, in 1970 about 85% of all children lived in two-parent families, 11% lived in single-mother families, 1% lived in single-father families, and 3% lived with neither parent. As dramatic as these changes are, these statistics obscure the heterogeneity within these categories. For instance, two-parent families include both two-biological parent families and stepparent families, and, as discussed below, the adjustment of young people in these family forms differs in important ways. Similarly, single-mother and single-father families can also include a cohabiting partner (same or opposite sex), one not recognized within the aforementioned Census Bureau definition of family.

An emerging literature that relies on retrospective reports of family structure history and/or applies estimation procedures to conventional point estimates of family structure provide a more accurate picture of children's family experiences. These measures highlight the heterogeneity and fluidity that underlie these single point-in-time estimates (Bumpass & Lu, 2000; Teachman, 2003; Wu & Martinson, 1993). Dramatic increases in divorce rates in the 1970s fueled much of the literature regarding family structure and child well-being. Yet divorce is not the only significant change in the family. More than ever, increases in nonmarital fertility and changes in marriage, cohabitation, and remarriage have shaped the family trajectories of American youth. Particularly noteworthy are trends that define the two major "alternative" family structures: single-parent families and stepparent families.

**Single-Parent Families** The modal "alternative" family structure category is single-parent families (Bumpass & Lu, 2000). This family type has always been a part of the family structure regime in the United States. What has changed are the demographic factors driving this status. At the start of the 20th century, high mortality rates were largely responsible for the incidents of single-parent families, leaving widows to raise their children. By the 1960s and 1970s, most single-parent families were created through divorce or separation. In the early 21st century, nonmarital fertility is contributing to the growth of single-mother families. About a quarter of children lived in single-parent families in 2001, up from about 12% in 1970. In all, life course estimates suggest that about half of all U.S. children will spend some time in a single-parent family (Bumpass & Sweet, 1989).

Parental divorce is a major contributor to single-parent families. Divorce rates increased dramatically across the 20th century, peaking around 1980, and thereafter remained stable, even receding for some social groups (Raley & Bumpass, 2003). Still, divorce remains a common family structure transition for American youth. At the beginning of the 21st century, about a half of all marriages ended in divorce, with half of these involving children (Amato, 2000). In all, about 40% of all children will experience parental divorce by age 18. The likelihood of divorce varies by race and social class, with more disadvantaged families experiencing a greater likelihood of divorce or separation than others (Raley & Bumpass, 2003).

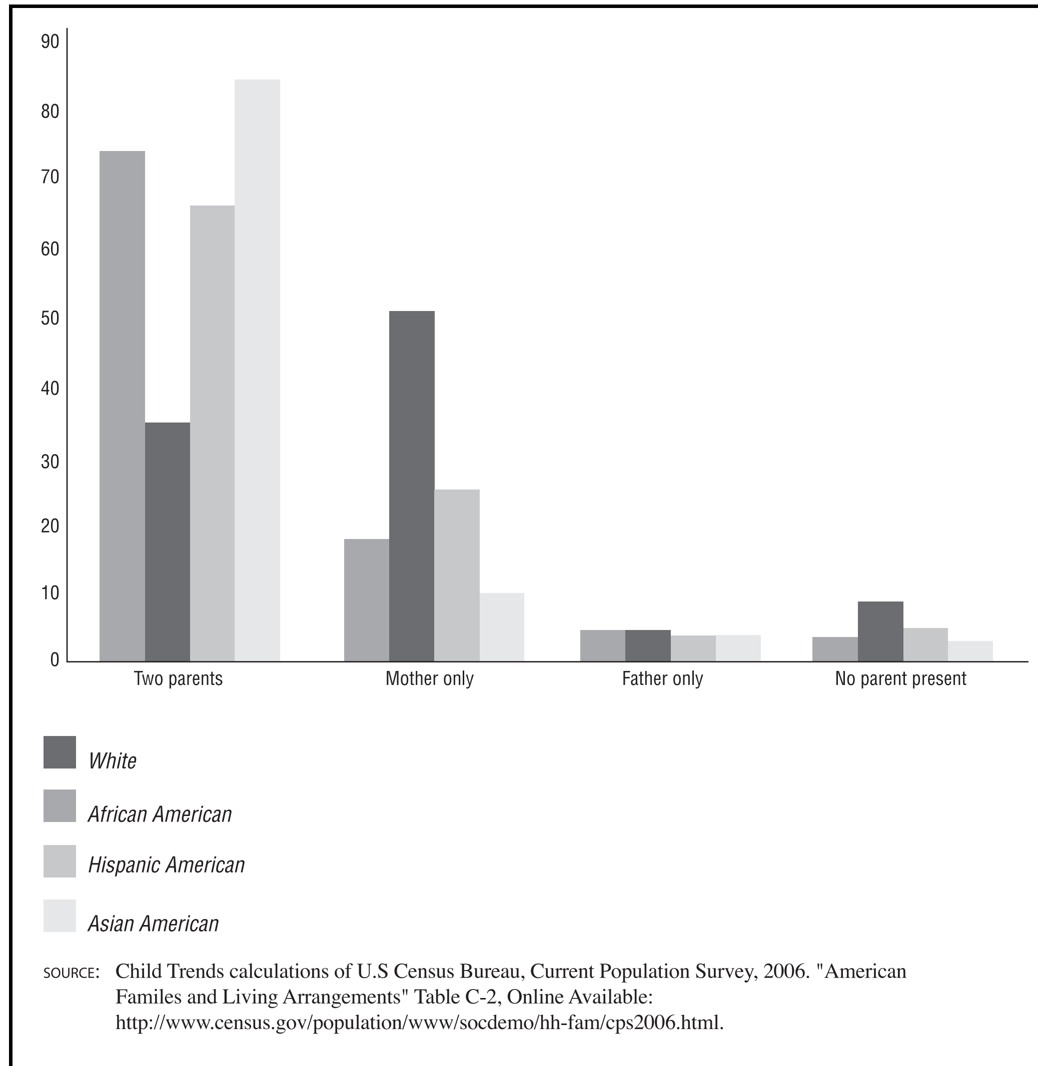


***Figure 1.*** *Living arrangements of American children, by race and ethnicity, 2006.* CENGAGE LEARNING, GALE.

Another factor contributing to the high proportion of single-parent families is nonmarital fertility. In the early 21st century, the majority of all babies in the United States are born into married-parent families. Rates of nonmarital fertility, however, have risen markedly since the mid-20th century. In 1970 about 10% of all births occurred outside of marriage, which contrasted with a 40% figure for the early 21st century (Hamilton, Martin, & Ventura, 2006). Pronounced race/ethnic differences exist in the percentage of births to unmarried women. In 2005, about 70% of all births to non-Hispanic Black women, 63% of births to American Indian or Alaskan native woman, and 48% of births to Hispanic women occurred outside of marriage, compared with about 25% for non-Hispanic White women and 16% for Asian or Pacific Islander women (Hamilton et al., 2006). Although these births occurred outside a marital union, about 40% of them did occur in a cohabiting union. This, too, varies by race/ethnicity, with about half of White and Latinos births and a quarter of African-American births occurring in such unions (Wildsmith & Raley, 2006).

The majority of young people in single-parent families—especially very young children—reside with their mother. Father-only families, although statistically rare, are becoming more common. Between 1960 and 2001, the proportion of father-only families grew from about 1.4% to 3.1%, representing an increase of more than 100% (Kreider & Fields, 2005).

**Stepparent Families** Residing in stepparent families is also a common experience for American children (Coleman, Ganong, & Fine, 2000). Like single-parent families, stepparent families have always been a part of the American family portrait. Historically, parental death was the leading precursor to this family structure. Moreover, most

of these families were formed through remarriage among widowed mothers. In the early 21st century, divorce and, to a lesser extent, nonmarital fertility often precede this status. Similarly, contemporary stepparent families are initiated through either marriage or cohabitation. Overall, about 7% of children live in a stepparent family (Kreider & Fields, 2005). Yet almost one-third of U.S. children born in the early 1980s are expected to spend some time in a stepparent family (Bumpass, Raley, & Sweet, 1995).

A nontrivial number of cohabiting stepparent families are headed by gay and lesbian parents. Estimates based on the 2000 census indicate that about 1% of all U.S. households include same-sex partners, with these families equally divided among female and male couples. Among female same-sex partner households, about a third include children. Among male same-sex partner households, about 22% include children (Simmons & O'Connell, 2003).

## WHAT ARE THE IMPLICATIONS OF THESE CHANGES?

What does this diversity in family structure mean for contemporary American youth? Although the magnitude and long-term implications of changes in family structure continue to be debated (Cherlin, 1999), scholars generally agree that children raised by two continuously married parents are, on average, better off on a host of indicators than are children in other family forms. The number of studies that explore these associations is vast, and these studies measure family structure and child adjustment in many ways. Nevertheless, some general associations can be outlined between the two most common alternative family structures—single-parent and stepparent families—and child well-being, measured in terms of emotional, social, and cognitive adjustment.

**Single-Parent Families** As mentioned above, divorce is a common factor leading to this family status and, for a long time, was the primary focus of family structure research. Compared to those in stable, married-parent families, children with divorced parents were, on average, more likely to be depressed, engage in problem behaviors such as minor delinquent acts, smoking, and underage drinking, drop out of high school, score lower on standardized tests, transition to first sex earlier, become pregnant as a teenager, and report poorer grades than others during childhood and adolescence (Amato, 2000; McLanahan & Sandefur, 1994). Given that the overwhelming majority of these young people reside with their mother, nearly all of the empirical work on single-parent families is based on mother-only families. Yet, as noted above, young people do reside in father-only families, and the few studies that have explicitly studied them indicate that these families are different from mother-only families in important ways (e.g., higher income, less stable, different parenting styles). Overall, young people in these families often look about the same or worse than do those in mother-only families. Much of this effect is explained by differences in parenting practices and family instability (Harris, Cavanagh, & Elder, 2000).

The research on children born outside of marriage is less extensive, but the findings are similar. Compared to those raised in stable, married-parent families, children born outside of marriage report, on average, lower levels of emotional, social, and cognitive adjustment (Amato, 2005). Research underway includes the Fragile Families and Child Wellbeing Study, which focuses on nearly 5,000 children born between 1998 and 2000 who were disproportionately born to unmarried parents. This study, designed to better understand the ways nonmarital fertility affects development, promises to provide additional insights into the implications of nonmarital fertility for child and adolescent development.

**Stepparent Families** Researchers also have investigated the consequences for children residing in a stepparent family. Although the presence of a stepparent usually improves children's standard of living and means that two adults are available to monitor and supervise children's behavior, researchers consistently show that children in stepfamilies exhibit more problems than do children with continuously married parents and look about the same as do children who live with single mothers (Coleman et al., 2000; McLanahan & Sandefur, 1994).

Researchers have generally assumed that the pathway to this family form is universal (e.g., marriage → single parenthood → remarriage). Work in the early 21st century, however, suggests that the pathway to this family status can moderate its association with adolescent adjustment. For instance, Sweeney (2007) found that young people in stepfather families formed after divorce reported better mental well-being than did those in stepparent families formed after a nonmarital birth. Similarly, research by Manning and Lamb (2003) indicates that adolescents living with cohabiting stepparents fared worse than those living in married stepfamilies. In both cases, most of these differences were explained by differences in the socioeconomic circumstances of these families.

A small but growing area of family scholarship focuses on adolescent well-being in gay or lesbian families. Although the number of young people who report living in a gay or lesbian family remains small even in large, nationally representative studies such as Add Health (where parent's sexual orientation is not asked directly but is inferred by the gender of the parent's partner), the existing evidence suggests that adolescents living with same-sex parents do about the same on a host

of emotional, behavior, and cognitive indicators as those living with opposite-sex parents (Patterson, 2006).

## WHAT FACTORS EXPLAIN THESE LINKAGES?

Some combination of economic hardship, compromised parenting practices, and increased emotional stress have been used to explain the link between family structure and child adjustment. Research by McLanahan and Sandefur (1994) indicates that about half of the "divorce" effect observed in young people in single-parent families is explained by changes in the resident parent's financial status. Mothers typically gain custody following divorce and often experience a substantial decline in family income and an increase in economic instability. This economic uncertainty, in turn, can further exacerbate stress in the home environment, often prompting residential and school changes and altering the mother's work schedule (Amato, 2000). Single parents also may employ less effective parenting strategies than others (Amato, 2000; McLanahan & Sandefur, 1994). This comes about both because of increased economic stress and because mothers are less available to their children on a day-to-day basis. Heavier responsibilities plus diminished economic resources often leads to harsh and inconsistent parenting, less supervision, and weakened parental authority that undermines the parent–child relationship (McLanahan & Sandefur, 1994).

Parenting practices and family stress also play a role in explaining young people's adjustment in stepparent families. Compared with biological parents, stepparents often lack the legitimacy of biological parents and/or have less incentive to invest time in the children living in their homes. As a result, what they can and do offer young people is not always equivalent to what biological parents can offer. Children and adolescents in these families also report lower levels of parental support and closeness with both biological parents and stepparents (Goldscheider & Goldscheider, 1998; Sweeney, 2007). Living in stepparent families means that children and adolescents must adapt to new people in the household—not only a parent's partner but also stepsiblings. These young people must also balance their relationships with their parent's partner along with their own evolving relationships with their resident and nonresident parents. Doing so can be stressful for young people, who often balance feelings of guilt, jealousy, and friendship with the key adults in their lives (Amato, 2000).

## WHAT ABOUT THE ROLE OF FAMILY INSTABILITY?

As compelling as the associations between family structure and child and adolescent adjustment are, the living arrangements of American children are far more dynamic than these static measures of family structure imply. From the perspective of a child, family structure can often include some combination of parental marriage, divorce, single parenthood, cohabitation, and remarriage (Bumpass & Lu, 2000; Teachman, 2003). Given this, what is missed when family structure is thought about and measured in this way? An emerging literature attempts to address this question through the instability and change perspective.

Building on stress theory, this perspective posits that changes in a parent's marital or romantic histories constitute a major stressor in a child's life. Beyond highlighting that family structure change is stressful, this perspective emphasizes the potentially cumulative nature of family structure change. Although many children never experience a family structure change, those who experience one family transition are at a greater risk of experiencing subsequent transitions and the concomitant stresses that they involve (Wu & Martinson, 1993). Thus, young people who experience multiple family transitions are expected to experience more compromised well-being than those who experience no such transitions or only one (Fomby & Cherlin, 2007; Teachman, 2003).

Research backs up this assertion. Beginning with early childhood, family instability in early childhood was associated with increases in behavioral problems at age 3 (Osborne & McLanahan, 2007) and at the transition to elementary school (Cavanagh & Huston, 2006). Family instability also was negatively associated with white children's problem behavior during middle childhood (Fomby & Cherlin, 2007). Finally, family instability was associated with the nature of young people's romantic relationships (Cavanagh, Crissey, & Raley, in press) and the likelihood of a premarital birth for all women during adolescence (Wu & Martinson, 1993).

## WHAT ROLE DOES SELECTION PLAY IN THESE ASSOCIATIONS?

The empirical evidence linking family structure and child adjustment is quite impressive, but does this mean the link is causal? That is, does residing in a particular family structure *cause* compromised child well-being, or is the observed link the result of maternal and paternal characteristics that affect both the likelihood that parents' experience unstable romantic histories and that their children experience compromised well-being in childhood? Although no social group is immune from the family changes described above, there are important racial, ethnic, and social class differences in the likelihood of experiencing a stable two-parent family environment, on the one hand, and a family marked by change, on the other. These differences, in turn, are also related to how well children do on a host of indicators.

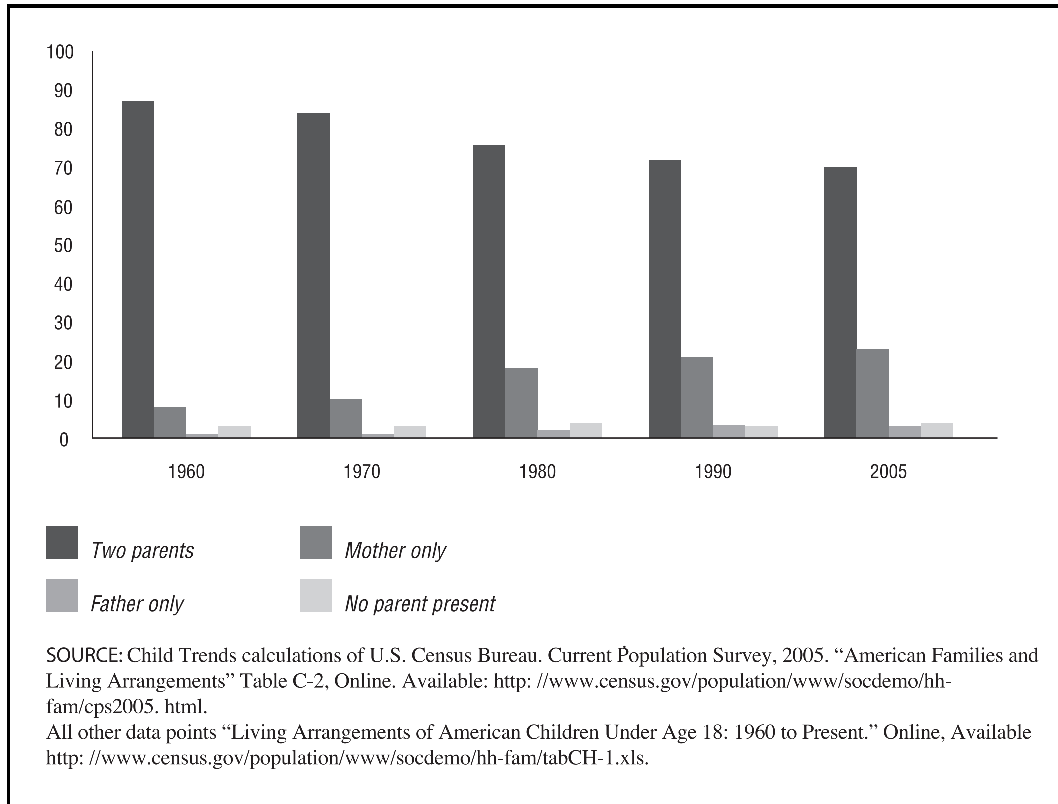


***Figure 2.*** *Living arrangements of American children, 1960–2005.* CENGAGE LEARNING, GALE.

The only way of determining causality is by randomly assigning families to different family structure statuses—a design that is implausible for practical and ethical reasons. Short of that, researchers have used different statistical methods and included different indicators that tap selection processes. A 2007 study by Fomby and Cherlin highlights the important of selection in understanding the link between family structure and child adjustment. With indicators of family instability as well as a comprehensive list of maternal characteristics associated with selection, they found that, for African-American children, maternal characteristics explained all of the observed family instability effect on children's cognitive functioning and problem behavior. For Whites, selection processes also mattered, but an instability effect on problem behavior remained. In all, scholars agree that selection plays a significant role in the link between family structure and child adjustment, but that the experience of family structure change remains a factor in child well-being (Amato, 2000).

## FUTURE DIRECTIONS

The first wave of family structure research focused on the impact of divorce and remarriage on child well-being. Much of this work relied on a fairly simple model of family change where all children were assumed to be born in a marital union that eventually dissolved, with some experiencing a subsequent parental remarriage. This model held for most children (especially White, middle-class children) and provided compelling and consistent information about the association between divorce and child well-being. This model, however, has become outdated and does not reflect the realities of the lives of American children in the early 21st century. Despite pronounced racial and ethnic differences in family structure histories, the implications of family structure for children of color, especially African-American children, remains largely unclear.

Informed by changing fertility and marriage patterns along with ethnographic research that highlights the fluidity of family experiences, the second wave of family structure research may continue to look beyond static measures of family structure and attempt to incorporate the whole of children's family structure experiences. Divorce rates have stabilized, but nonmarital fertility continues to increase. Moreover, children born outside of marriage are at a greater risk of experiencing more family transitions, including the formation and dissolution of (multiple) parental marriages and cohabitations throughout their early life course. Together, these

changes are shaping the lives of American children in the early 21st century.

These changes are also shaping the way some family scholars think about the family and its impact on children. The aforementioned Fragile Families and Child Wellbeing Study represents both an example of how family scholars are thinking about family structure and an exciting resource for studying the implications of nonmarital fertility and family instability for child and adolescent adjustment.

**SEE ALSO** Volume 1: *Child Custody and Support; Grandchildren; Parent-Child Relationships, Childhood and Adolescence; Policy, Child Well-Being; Poverty, Childhood and Adolescence;* Volume 3: *Grandparenthood.*

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***Shannon E. Cavanagh***

# FAMILY PROCESS MODEL

The family process model posits that the effects of poverty on child well-being go beyond the material resources afforded by higher incomes. According to the model (see Figure 1), poverty impacts children's development indirectly through its negative effect on family processes. The reasons are simple. Poverty is a highly disorienting and

upsetting experience that, perniciously, can make parents doubt themselves and lose hope in the future. In this way, it introduces a level of stress and discord into the family that ultimately affects the social, emotional, and academic lives of children. From the family process literature, two general aspects of the home environment—parents' marital or romantic relationships and parenting behaviors—have been identified as primary avenues through which family processes link poverty to child development.

A wealth of empirical evidence has documented that growing up in poverty places children at risk for a wide range of physical, cognitive, and socioemotional problems (Seccombe, 2000). For example, parents and teachers report that low-income children are more likely to be aggressive, to experience symptoms of depression, and to receive lower scores on measures of academic achievement compared to their more affluent peers. Understanding the ways in which poverty affects children's well-being, therefore, is an important goal for social science researchers. In the large and growing body of literature on the development of economically disadvantaged children, a powerful explanation for the association between poverty and poor development has emerged: the family process model, which is the focus of this entry.

## CHILDHOOD POVERTY IN THE UNITED STATES

In 2006 about 17% of American children were raised in families with annual incomes that fell below the government poverty level of $20,614 for a family of four (U.S. Bureau of the Census, 2007). More American children live in poverty than was the case in the late 1970s and than children from any other industrialized nation. American children are also more likely to experience poverty than adolescents or adults. Although these statistics highlight the pervasiveness of childhood poverty in the United States, they do not provide a complete picture of poor American youth. Millions more families, with annual incomes just above the poverty level, also struggle to earn enough money for food and rent. Furthermore, the number of economically disadvantaged children, measured by multiple factors including family income, family structure, and educational attainment, is far greater than these basic statistics suggest.

Children from every racial/ethnic background live in poverty, but the likelihood of growing up in an impoverished family is much lower for White and Asian children than for African-American and Hispanic children. During the 10 years beginning with the mid-1990s, approximately 30% of African-American and Hispanic children lived in families with incomes below the poverty level, compared to about 10% of Asian and White children (Children's Defense Fund, 2004). Not only are African-American and Hispanic children more likely to live in poverty, but they are also more likely to live in high-poverty communities and to live in poverty over longer periods of time compared to poor White children.

**Poverty and Child Development** Not surprising, growing up in poverty places children at risk for a wide range of negative developmental outcomes. As mentioned, numerous studies have documented the association between poverty and poor physical, cognitive, social, and emotional development. For example, infants born to poor families are more likely to experience malnutrition, failure to thrive syndrome, and sudden infant death syndrome. During childhood, poverty is associated with poor performance on measures of cognitive functioning, as well as internalizing problems such as depression and anxiety and externalizing problems such as aggressive and antisocial behavior. Among adolescents, poverty is related to obesity and overall health. Poor adolescents are also more likely to become pregnant, associate with deviant peers, and experiment with illegal drugs than more affluent youth.

Research demonstrates that poverty also has a negative impact on academic achievement, and differences between poor and more affluent children can be seen at the very start of formal schooling. Economically disadvantaged children score significantly lower than both middle- and upper-class children on measures of reading and math achievement at the beginning of kindergarten and this problem is especially pronounced for poor racial/ethnic minority children. The substantial gap in academic competencies between poor and more affluent children persists throughout their educational careers. Poor children and adolescents earn lower grades and lower scores on achievement tests, they are more likely to be placed in lower curricular tracks and special education programs, and they are less likely to graduate from high school or enter into higher education than nonpoor youth (McLoyd, 1998).

**Explanations for the Association Between Poverty and Poor Child Development** Given that poverty affects child development within and across racial/ethnic groups, the next step is to understand how this occurs. Explanations for the association between poverty and children's well-being often center on the lack of material resources available to poor children and their families. For example, children raised in poverty often live in unsafe neighborhoods, attend ineffective schools, have poor diets, and receive little health care. According to financial capital models, poverty affects children directly by limiting material resources that are beneficial to children's development and well-being. Although some studies provide support for these models, the effects of poverty vary greatly from one outcome to another, and there is little consensus among researchers regarding the size of the

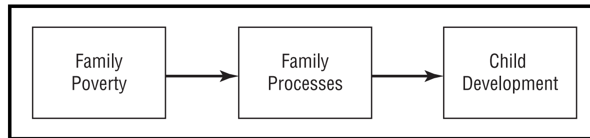


*Figure 1. A basic family process model.* CENGAGE LEARNING, GALE.

effects (Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Haveman & Wolfe, 1995). Moreover, financial capital models overlook the possibility that one of the greatest influences of poverty may be related to nonmaterial family resources.

## THE FAMILY PROCESS MODEL

One great advantage of the family process model is that it integrates two core developmental paradigms—ecological and life course theories—and thus bridges psychological and sociological approaches to the study of poverty and child development. From an ecological perspective (Bronfenbrenner, 1979), children develop within multiple, overlapping contexts and in increasingly complex interactions with their environments. The family process model draws on ecological theory by examining how processes in one context (family) influence the lives of children in other contexts (e.g., peer group). Developed most fully in the work of Elder (1998, 1999), life course theory views lives as interdependent trajectories embedded in social and historical contexts. The family process model takes a life course approach to studying child development by viewing children's lives as linked to their parents (i.e., parents' poverty disrupts children's development through its influence on parenting).

## SUPPORT FOR THE FAMILY PROCESS MODEL

The general framework of the family process model draws heavily on studies of White families of the Great Depression (Elder, 1999). In several studies, Elder and colleagues examined the effects of economic loss during the depression on children's behavioral and socioemotional development. The results of this research indicated that economic loss had few direct effects on children's well-being. Instead, negative child outcomes occurred indirectly through the fathers' poor psychological functioning and negative parenting behaviors. Fathers who experienced severe financial loss were more likely to use punitive, rejecting, and inconsistent disciplinary practices, and these parenting behaviors were significantly related to children's socioemotional problems.

Following the pioneering work of Elder and his colleagues, McLoyd (1990) proposed a model to examine how poverty and economic loss affect African-American children's socioemotional development. According to this model, impoverished families often experience an excess of adverse life events, and the resulting psychological distress diminishes parents' capacity for supportive, consistent, and involved parenting, which, in turn, disrupts children's socioemotional functioning. Subsequently, family processes have linked poverty to a wide range of negative socioemotional outcomes during childhood and adolescence, including anxiety, depression, and poor social competence, as well as behavior problems related to compliance, impulse control, aggression, and drug use in youth of all races. Importantly, the family process model has also been applied to the educational experiences of children and adolescents. Numerous studies have provided evidence that a wide range of parenting behaviors, including emotional support and warmth, discipline strategies, education-related practices, and the presence of household rules and routines, explain at least some of the well-documented association between family income and academic outcomes (Burchinal, Roberts, Zeisel, Hennon, & Hooper, 2006; Conger et al., 1992, 1993; Gutman & Eccles, 1999; Raver et al., 2007; Yeung, Linver, & Brooks-Gunn, 2002; Mistry, Vandewater, Huston, & McLoyd, 2002).

## MOVING BEYOND THE BASIC MODEL

Research has begun to extend the basic family process model in ways that have increased knowledge about child development in the context of economic disadvantage. For example, several studies have investigated the ways in which income (or the lack thereof) influences family processes. From this research, two primary pathways have emerged: parents' mental health and aspects of financial strain. In studies that vary widely with regard to family processes and child outcomes, poor parent psychological well-being (typically maternal depression) explains at least part of the association between income and family processes (Conger et al., 2002; Mistry et al., 2002; Parke et al., 2004; Vandewater & Lansford, 2005; Yeung et al., 2002). At the same time, a growing number of studies suggest that objective measures of economic hardship, such as low income, negatively affect parents' psychological well-being and parenting behavior through their impact on financial strain and stress (Gutman, McLoyd, & Tokoyawa, 2005; Mistry et al., 2002; Mistry, Biesanz, Taylor, Burchinal, & Cox, 2004).

Researchers have also sought to gain a better understanding of the extent to which the family process model applies to families across various racial, ethnic, and socioeconomic backgrounds. Although less is known about Asian and Hispanic families, studies of African-American families suggest that, in general, the family process model functions

well for this racial group (Conger et al., 2002; Jackson, Brooks-Gunn, Huang, & Glassman, 2000). The model also appears to hold not just for families who live in extreme poverty but also for working- and middle-class families who experience economic loss (Conger et al., 1992, 1993). Furthermore, studies that draw on samples from rural, suburban, and urban areas suggest that the family process model can be applied to families living in a variety of geographic contexts (Conger et al., 2002; Gutman et al., 2005; Jackson, Brooks-Gunn, Huang, & Glassman, 2000).

## FUTURE RESEARCH

Despite strong empirical and theoretical grounding for the family process model, gaps in the literature remain. For example, few researchers test the applicability of their proposed models for diverse racial/ethnic groups, making it difficult to determine the robustness of their findings for different races/ethnicities. Through early 2008, only three known studies have examined the equivalence of their conceptual models across various racial/ethnic groups. In an investigation of adolescents' academic achievement, Gutman and Eccles (1999) found that negative parent–adolescent relationships and school-based parental involvement explained the association between financial strain and achievement for both African-American and White families. No significant differences in the models between the two racial/ethnic groups were found. Parke and colleagues (2004), however, reported that paternal hostile parenting was related to adjustment problems for fifth-grade White children, whereas marital problems predicted poor adjustment for Mexican-American children.

In the most comprehensive investigation of model equivalence across race/ethnicity, Raver, Gershoff, and Aber (2007) examined the importance of a wide range of family processes in explaining the association between family income and measures of school readiness for African-American, Hispanic, and White families. Results of this study suggest that important differences may exist across the three racial/ethnic groups. For example, income was a stronger predictor of children's kindergarten achievement for African-American children than for Hispanic or White children. Material hardship was also more strongly related to parents' stress in African-American families. The positive association between parenting behavior and children's social competence, however, was stronger for White families than for racial/ethnic minority families. Taken together these studies suggest that racial/ethnic variation in family process models likely depends on a number of factors, including the family processes and developmental outcomes of interest, the stage of development, the gender of the parent, and the definition of economic disadvantage.

Research also needs to gain a better understanding of resilience in the context of poverty by incorporating protective factors into the family process model. To do so, researchers can focus on the association between poverty and family processes, the first piece of the model. Although poverty typically disrupts marital and parent–child relationships, differences exist in the home environments of poor families and are likely related to individual characteristics of family members as well as factors in work, school, and neighborhood settings. As one example, research indicates that economically disadvantaged parents are less optimistic about their children's educational chances than more affluent parents. For a variety of reasons, however, some poor parents are able to maintain positive beliefs about their children, despite their economic situation. In these families, optimistic beliefs about their children's educational careers may increase education-related parenting and thus represent a parent characteristic that protects against the impact of poverty on parenting.

Researchers can also identify protective factors by focusing on the second piece of the family process model: the association between family processes and child development. Investigating characteristics of children and their environments, especially those that are amenable to policy, is important for improving the well-being of economically disadvantaged children. For example, aspects of the school environment, such as characteristics of teachers and administrators and services and resources for families, may help to reduce the negative effect of disruptive family processes on low-income children's academic achievement.

In summary, the family process model has provided an excellent framework for understanding the importance of the family context in explaining the negative impact of poverty on children and adolescents' well-being. A large body of research has provided empirical evidence that the family process model can be applied to a wide range of developmental outcomes, to various developmental stages, to both boys and girls, and to families from diverse backgrounds. Investigating whether these models hold for different races/ethnicities and identifying protective factors, however, are important areas of future research, especially given their implications for policies aimed at improving the well-being of poor children.

**SEE ALSO** Volume 1: *Attachment Theory; Developmental Systems Theory; Elder, Glen H., Jr.; Parent-Child Relationships, Childhood and Adolescence; Policy, Child Well-Being; Poverty, Childhood and Adolescence; Resilience, Childhood and Adolescence.*

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***Carey E. Cooper***

# FOSTER CARE

Foster care is a system in which licensed foster parents provide substitute care for children whose parents are unable to provide them with a safe environment. Between 1985 and 2005 the number of children in foster care increased from 276,000 to 513,000. Understanding who is in foster care, how the foster-care system operates, and why caseloads have grown is important for several reasons. First, foster children have higher rates of emotional, behavioral, developmental, and physical health problems than children outside of foster care. Second, the growth in foster-care caseloads has resulted in larger workloads for individual caseworkers, which is problematic because mistreatment of foster children is often blamed on the large number of cases caseworkers must manage. Third, government expenditures on foster care increase as the number of children in the system grows.

Before discussing the formal foster-care system, it is important to distinguish between formal foster care and other types of out-of-home care. Children in the formal foster-care system represent only a fraction of the children being cared for by someone other than their parents. Researchers from the Urban Institute estimate that approximately 2 million children lived in the care of someone other than their parents in 1997 (Ehrle & Geen, 2002; Ehrle, Geen, & Clark, 2001).

The type of out-of-home care is typically defined by whether the child is living with relatives and whether child-welfare services staff are involved (Ehrle et al., 2001). The most common type of out-of-home care is *private kinship care* (an estimated 1.3 million children in 1997), in which the caregivers are related to the child and there is no involvement by child-welfare services. The next most common arrangement is *public kinship foster care* (an estimated 500,000 children in 1997), in which child-welfare services are involved and relatives care for the child. In this case, child-welfare services may formally remove the child from the custody of his or her parents in which case the child is said to be in *formal kinship foster care* (an estimated 200,000 children in 1997). If child-welfare services are involved but do not obtain custody, the child is said to be in *voluntary kinship foster care* (an estimated 300,000 children in 1997). Finally, a smaller number of children are in *public foster care* (an estimated 200,000 children in 1997), whereby child-welfare services staff obtains custody of the child and places him or her with unrelated caregivers.

Understanding the different caregiving arrangements is important because most foster-care data pertains only to children in the custody of the state (children in public foster care and formal kinship foster care). Figure 1 shows the total number of children in foster care at the end of each fiscal year over the period from 1962 to

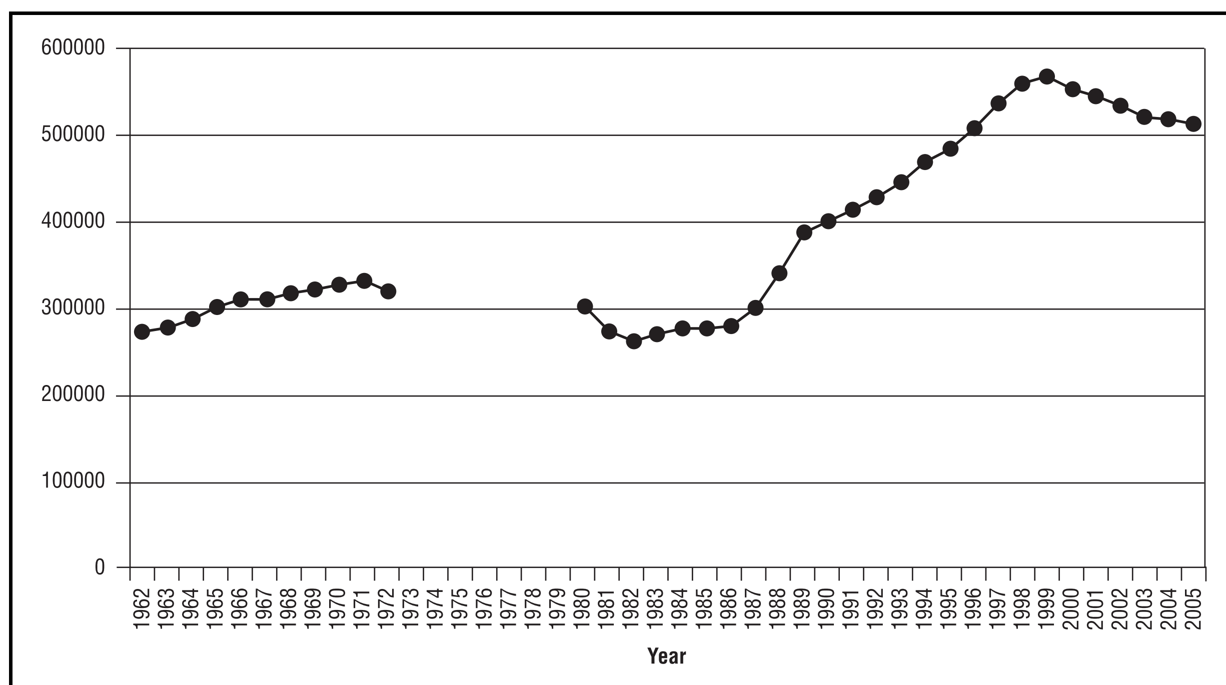


***Figure 1.*** *Children in foster care.* CENGAGE LEARNING, GALE.

2005. Although data are not available for the period from 1973 to 1979, it appears that the number of children in care remained relatively constant from the early 1960s to the mid-1980s. Beginning in the mid-1980s, the number of children in foster care started to rise dramatically. The caseload peaked in 1999 before declining.

Researchers have suggested a number of factors to explain the increase in the number of children in care. These include changing economic conditions, social norms (e.g., the increase in the number of single-parent families), rates of parental substance abuse, rates of HIV/AIDS infection, rates of incarceration (particularly of women), and welfare policy. Early research highlights the role of the "crack cocaine epidemic" (U.S. Department of Health and Human Services, 1999; U.S. General Accounting Office, 1997). More recently, Swann and Sheran Sylvester (2006) studied the relationship between foster-care caseloads and a number of these factors and found a positive relationship between the rate of incarceration of women and the number of children in foster care and a negative relationship between welfare benefits and the number of children in foster care.

## ENTRY INTO FOSTER CARE

In most cases, children come to the attention of child-welfare workers through reports of abuse or neglect. The complaint may come from a relative, teacher, doctor, law enforcement official, or someone else. It may involve physical or sexual abuse, neglect, or parental absence. Neglect results from parents who are present but are not providing adequate food, shelter, clothing, or appropriate medical care. Parental absence refers to parents who are either physically absent (e.g., because they are incarcerated) or present but incapacitated (e.g., because of drug abuse). Children may also come to the attention of child-welfare workers through their own behavior (e.g., through the juvenile justice system).

The exact path from the initial report to foster care depends on the circumstances and jurisdiction, but it will involve an investigation and the determination that removal from the home is necessary to ensure the safety and well-being of the child (Pecora, Whittaker, Maluccio, & Barth, 2000; Schene, 1998). A number of different factors bear on the ultimate decision to remove a child. These include the substantiation of the alleged abuse/neglect and the determination that the parent is unable or unwilling to protect the child. The specific type of placement will depend on the availability of relative caregivers or non-kin foster caregivers as well as the specific needs of the child (e.g., a child may have special needs that cannot be met by relatives).

In order to study the pathways into foster care, it would be ideal to have information about the children, their families, and the decision made at each step in the process. Unfortunately, such complete information does not exist. Consequently, researchers take two approaches. One is to study the characteristics of children in care. This

approach focuses on the big picture rather than on individual steps in the process. For example, in a study of foster children in California in 1991, Lewit (1993) found that 20% of entrants were subject to physical or sexual abuse, whereas 68% were victims of neglect. In other findings, 26% of entrants were neglected because of parental absence or incapacitation, and 42% were victims of neglect because of inadequate care. Additionally, administrative data from the Adoption and Foster Care Analysis and Reporting System (AFCARS) shows that infants make up the largest percentage of entrants into foster care (U.S. Department of Health and Human Services, 2006). This report also shows that almost one-third of the entrants are African-American.

In the second approach, researchers explore the relationship between case (child and family) characteristics and a single decision made by child-welfare officials such as the decision to terminate parental rights. Lindsey (1992), for example, used data on children who had come "to the attention of public child welfare agencies throughout the United States" (p. 30), whereas Zuravin and DePanfilis (1997) focused on children already receiving child-welfare services in a large mid-Atlantic city. In both studies, the families had been reported to child protective services and been investigated. Given this, the research sought to understand what factors were related to the decision to remove the child from the home. Zuravin and DePanfilis found that children whose mothers abused drugs, had developmental problems, or suffered from mental health problems were more likely to be placed in foster care, whereas Lindsey found that children in families with uncertain income prospects were more likely to be placed in foster care.

## CHARACTERISTICS OF FOSTER CHILDREN

Consistent with their high rate of entry into the foster-care system, studies find that Black children are overrepresented in the foster-care system (e.g., McRoy, 2005; U.S. Department of Health and Human Services, 2006). The overrepresentation of minorities in the foster-care system is an important topic that is surveyed by McRoy (2005).

Additionally, many researchers find that children in foster care are more likely than other children to have poor health, behavioral problems, difficulties in school, and other developmental issues (e.g., Committee on Early Childhood, Adoption, and Dependent Care, 2002; Fine, 1985; Jones Harden, 2004). Hochstadt, Jaudes, Zimo, and Schachter (1987) focused specifically on the health of children entering foster care and found high rates of developmental delays as well as emotional and behavioral problems.

Research suggests that stability during childhood is an important determinant of child development (Jones Harden, 2004), and a goal of child-welfare workers is to provide a stable environment for foster children. Unfortunately the data on foster children indicate that placement instability is common. For example, in 2001, 22% of children had experienced three or four placements during their current episode of care, 8% had experienced five or six placements, and 9% of children had experienced seven or more placements (U.S. House of Representatives, 2004). Webster et al. (2000) studied the relationship between case characteristics and placement instability for children in long-term foster care in California. Similar to other authors (e.g., Goerge, 1990), they found that being placed with kin is associated with greater stability.

## EXITS FROM FOSTER CARE

Children may exit from foster care through a number of routes. These include reunification with parents, adoption, emancipation ("aging out"), running away, and death. The U.S. Department of Health and Human Services report discussed above includes descriptive information about the characteristics of children who exited foster care in fiscal year 2005. More than 10% of the children leaving foster care in 2005 were 17 years or older. Most of these children had "aged out" of the foster-care system, and they are of particular concern because studies suggest that many of these children are unprepared to live independently (Nixon, 2005). More than half of the children who left foster care were reunified with family, whereas 18% were adopted.

A number of studies (e.g., Benedict & White, 1991; Courtney, 1994) go beyond a simple description of the characteristics of children leaving care to explore the child, family, and placement characteristics associated with the probability of exiting foster care and the length of time in care when an exit occurs. Because many children experience more than one episode of foster care, additional research (e.g., Courtney, 1995; Festinger, 1996; Goerge, 1990) has explored both the probability of leaving care and the probability of reentering care.

It is important to remember, however, that although reunification and adoption are frequently cited goals of the foster-care system, all types of exits are not necessarily equally good. Furthermore, a particular child characteristic might increase the probability of some types of exits while decreasing the probability of other types of exits, and a different characteristic might reduce the probability of any type of exit.

McMurtry and Lie (1992) and Courtney and Wong (1996) studied how different child, family, and placement characteristics are related to different types of exits. Courtney and Wong used data on children who entered foster care in California in the first half of 1988 to look at exits in

which children were reunified with family, were adopted, or ran away. They found that reunification typically happens very early in a foster-care spell, whereas adoption typically happens after several years in care. The likelihood of running away is highest early in the episode of care.

In terms of individual characteristics, Courtney and Wong (1996) found that being younger is associated with higher probabilities of being reunified, lower probabilities of being adopted, and lower probabilities of running away. Being African-American is associated with lower probabilities of reunification and adoption. This implies that African-American children will have, on average, longer stays in the foster-care system than children in other ethnic groups, a result also found by McMurtry and Lie (1992). Similarly, both studies found that significant health problems or disabilities reduce the probability of any of the three types of exits, suggesting that children with health problems may remain in the child-welfare system longer than other children.

There is also great concern about the amount of time children spend in foster care regardless of the type of exit. In fact, two key pieces of legislation, the Adoption Assistance and Child Welfare Act of 1980 and the Adoption and Safe Families Act of 1997, are focused in part on reducing the length of time children spend in foster care (Glisson, Bailey, & Post, 2000). From 1999 to 2001, the average time in foster care for children leaving care was 22.4 months (U.S. House of Representatives, 2004); however, almost 15,000 children exiting care in 2005 left after spending 5 or more years in care (U.S. Department of Health and Human Services, 2006).

## LIFE AFTER FOSTER CARE

Relatively few studies explore the long-term consequences of foster care. An important reason for this is the difficulty of finding and interviewing former foster children (Barth, 1990). The studies that have been conducted have found mixed results. Maluccio and Fein (1985) reviewed a number of studies and concluded that foster care does not negatively affect children. In a separate review, Barth (1986) concludes that former foster children face significant educational and employment challenges but are otherwise similar to the general population. Barth (1990) studied 55 former foster children in the San Francisco area and found that they fare worse than the general population. More than one-third of the former foster children had been arrested, been convicted of a crime, or spent time in jail or prison since leaving foster care. Almost half had health problems, and more than one-third had significant uncertainty about their living arrangements.

## CURRENT ISSUES IN FOSTER CARE

The role of kinship care continues to evolve and grow (Geen, 2004; Ingram, 1996). There are several reasons for this, including a shortage of non-kin foster parents and the Adoption and Safe Families Act's recognition of placement with kin as an acceptable long-term placement outcome. The growing role for kin caregivers raises a number of issues such as the services that should be made available to kin and appropriate licensing requirements. Prior to the widespread use of formalized kinship care, family members provided care without any involvement with or support from child-welfare workers. In other words, no licensing was required, and no services were provided. Studies have since shown that kin caregivers may have greater needs than non-kin caregivers but receive fewer services (Geen, 2004). Clarifying the rights and responsibilities of kinship caregivers will be an important continuing development in foster care.

Coordination among a number of different government systems and programs is becoming increasingly important because of legislation passed in the late 1990s. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 made dramatic changes in the operation of cash welfare programs (e.g., by implementing time limits), and it combined federal funding for many social service programs, including child-welfare programs, into a single grant. States are allowed to allocate money from this grant to programs in any way they see fit, which may affect budgets for child-welfare services. Additionally, the dramatic increase of incarcerated mothers has created special concerns in light of the Adoption and Safe Families Act's focus on expediting permanency decisions and moving children more quickly to adoption.

**SEE ALSO** Volume 1: *Adopted Children; Child Abuse; Policy, Child Well-Being; Poverty, Childhood and Adolescence;* Volume 2: *Adoptive Parents.*

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***Christopher A. Swann***

## FREUD, SIGMUND
### *1856–1939*

Sigmund Freud lived for most of his life in Vienna, Austria. At the age of 29, he opened a private medical practice specializing in nervous disorders. Many of his first patients were women suffering from hysteria, a mental disturbance with disabling symptoms such as hallucinations and paralysis. Freud came to believe that these symptoms were the indirect expressions of early actual or imagined experiences of trauma that the patient had banished from consciousness, and he developed therapeutic methods (in which hypnosis was soon replaced by talk therapy) to bring these experiences back into consciousness in ways that alleviated the hysterical symptoms.

Founding a radically new psychology, which he named *psychoanalysis*, Freud began to develop a set of theories to assist his work with patients. As cornerstones to this effort, he formulated two related concepts: repression (a psychic process that works to protect the stability of the person's selfhood by banishing disturbing impulses and experiences from consciousness) and the unconscious (a mental structure that harbors the memories of these

repressed experiences in such ways that often, years later, they reemerge in disguised and disabling ways to agitate the conscious self).

Bringing to light his patients' repressed memories led Freud to a series of findings that outraged many of his contemporaries. He discovered that, in many cases, these memories referred back to childhood sexual experiences, often involving seductions by an adult (usually the patient's father). The evolution of Freud's thinking about these findings proved pivotal to his theoretical developments. At first he believed the patients' accounts of sexual seduction to be literally true but then came to the conclusion that, in most cases, they were rather the product of early childhood wishful fantasies. This determination solidified what was to become a fundamental postulate of psychoanalytic psychology: *Psychical reality* (not factual reality) functions as the final arbiter in the shaping of the human personality, not only in childhood but throughout the life course. In the specific cases of his patients' repressed memories, moreover, Freud became convinced that what lie at the heart of their sexual content was a particular type of psychical reality: fantasies involving specific stages of *infantile sexuality*.

Although it was not until the 1920s that Freud put together a complete theory of the stages of psychological development, his writings on infantile sexuality contained most of its foundational elements. In this form, Freud's theory is organized as a sequential narrative of the shifts in the young child's preoccupation with different bodily organs, which serve for a time as the primary source of pleasurable sensations, defined broadly as sexual. In the child's first year (the *oral stage*), desires associated with the mouth become independent of the hunger drive and the focus is on pleasurable sensations. In the second year (the *anal stage*), desires associated with excretion give rise to a form of sexual pleasure connected to aggression. In the third to fifth year (the *phallic stage*), the focus of sexual pleasure shifts to the penis or clitoris, which, stimulated by masturbation and linked to fantasies involving the parent of the opposite sex, leads to a psychic drama that Freud called the Oedipus complex. In the throes of these fantasies, the child (in the case of the young boy) desires to take the place of his father in his relation to his mother, a goal that he is eventually forced to abandon. The child then banishes all desires of a sexual nature to the unconscious, where he or she remains repressed for 7 or 8 years (the *latency stage*). Only with

***Sigmund Freud.*** GALE, CENGAGE LEARNING.

the onset of puberty (the *genital stage*) do these earlier sexual desires reemerge, reorganized in ways that complement the now dominant reproductive genital drive.

In its later elaborated form, Freud's human development theory overlays on this narrative of psychosexual stages an additional theory of psychological growth based on a tripartite division of psyche: id, ego, and superego. At birth, the infant is governed by the id, a bundle of psychic instinctual energies seeking pleasurable discharge. During the child's first year, in conjunction with the oral stage, a second psychic structure, the ego, emerges as an agency representing the psyche's interactions with the outside world and, in particular, as a direct reflection of the child's identification with his or her primary caretaker (usually the mother). Later, usually in the fifth year at the conclusion of the phallic stage, a third psychic structure, the superego, is established. As the source of ideals that inspire action and of self-accusatory judgments that inflict guilt, the superego is modeled on the parents' standards of right and wrong.

Since Freud's death, psychoanalytic practitioners have offered major modifications to his development theory. One focus has aimed at establishing a more complete understanding of the complex processes of psychological growth in the years preceding the phallic stage.

**SEE ALSO** Volume 1: *Parent-Child Relationships, Childhood and Adolescence;* Volume 3: *Self.*

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***George Cavalletto***

# FRIENDSHIP, CHILDHOOD AND ADOLESCENCE

Friendship can generally be defined as a relationship characterized by mutual positive regard or liking. Other specific qualities such as intimate self-disclosure, loyalty, and social support often feature prominently in childhood and adolescent friendships, but these dynamics are shaped by and thus vary significantly according to such factors as historical era, age, gender, and social status of the individuals involved. To illustrate, girls more than their male counterparts are frequently socialized to value and engage in intimate self-disclosure with friends; thus it is difficult to argue that sharing intimacies is itself a defining feature of friendship. The amount of time young people spend together, the stability of these relationships, and what they do when they are together are also shaped by these broader social forces. But while the contours of friendship vary significantly across individuals and social groups, there is widespread scholarly agreement that friendships play a uniquely important role in the lives of children and adolescents.

## THE IMPORTANCE OF FRIENDSHIP DURING CHILDHOOD AND ADOLESCENCE

Parents are key influences throughout the life course, as they appear early on the scene, structure multiple aspects of children's and adolescents' lives, and communicate intensively and extensively with them as they develop. Nevertheless, friendship experiences also are critically important because they influence the child's evolving sense of identity, provide many opportunities for relationship skill-building (that is, practice in how to relate to others), and shape the child's cultural understandings (the sense of what is right or wrong, cool, or to be avoided at any cost). Various aspects of friendship have been shown to influence important child and adolescent outcomes ranging from emotional well-being to teen pregnancy and involvement in violent behavior. But while scholarly interest often has focused on these consequential outcomes, it is important to consider the degree to which playing with and having fun with friends is often at the heart of the childhood and adolescent experience. Accordingly, forging a friendship can be considered an important developmental accomplishment in its own right, as well as an influence on behavior, well-being, and later relationship experiences.

## HISTORICAL TRENDS

The advent of the Industrial Revolution is associated with a decline in the need for child labor, and the rise in compulsory education. In turn, the extensive periods of time children began to spend in public schools greatly increased exposure to similar-aged peers. Related to these developments, it could no longer be assumed that children would take up the occupations held by their parents, as had been commonplace in earlier eras. Children were increasingly required to forge their own identities, began to spend many hours outside the watchful eyes of their parents, and not surprisingly developed a heightened

sense of the importance of relationships beyond the family context. More recent developments such as women's increased labor force participation have resulted in even younger children's exposure to same-age peers in child-care and nursery school settings.

Although these larger trends have been associated with a basic shift in the overall importance of friendships during childhood and adolescence, cohort changes likely have also affected the character of the friendships that are formed. For example, throughout history traditional gender norms and parental control of dating and courtship fostered much segregation along gender lines. More contemporary patterns, however, include a greater likelihood of experiencing cross-sex friendships, and many instances in which romantic relationships have evolved from what began as friendship relations. Technological changes, including the use of the Internet, cell phones, and text messaging, have also changed the landscape of friendship, both in terms of how friends communicate and in the possibilities for forging connections outside the child's immediate social environment. Finally, one consequence of recent shifts to a later average age at marriage is that friendships often continue as important sources of social support, reference, and socializing as adolescents navigate the transition to adulthood.

## THEORETICAL PERSPECTIVES ON CHILD/ADOLESCENT FRIENDSHIPS

Developmental psychologists and sociologists alike have studied friendships during childhood and adolescence, but they have frequently emphasized different dynamics. Psychologists have often viewed friendship from the perspective of attachment theory, which focuses on the importance of early bonding with parents, especially the mother, as a pivotal phase of human development. According to this perspective, strong infant attachment results in feelings of comfort and security that are associated with greater willingness to explore and success within later relationships, including friendships. Researchers have thus studied the association between early family experiences and children's success in relationships with same-age peers, and these studies generally document carryover effects (that is, individuals characterized by secure early attachment are more likely to be well liked by peers and exhibit more skill in forging and maintaining friendships).

This perspective demonstrates how one phase of the life course may deeply influence the next one; theorists such as Sullivan (1953), however, developed the notion that while this is an important process, each phase of life also brings with it new opportunities and challenges. Accordingly, Sullivan argued that childhood friendships (what he called "chum" relationships) serve distinct functions for development, and often serve as an important corrective to what has occurred within the family unit.

Youniss and Smollar (1985) developed this perspective in more detail, focusing on the distinctive nature of children's and adolescents' relationships with friends as a contrast with their relationships with parents. These researchers argued that while the parent–child relationship is fundamentally hierarchical (parents have much more life experience to draw upon and more power in the relationship), friendships are generally much more egalitarian. In addition, unlike family bonds, friendships involve the element of choice. These basic features deeply influence the character of the two types of relations. The authors' contrasting depictions of parent–child and friendship relations are useful as they (a) suggest some limits of the idea of carryover effects from the world of family, (b) highlight specific ways in which friendships contribute uniquely to the child's development, and (c) provide a detailed portrait of how children actually experience these early relationships. For example, because the relationship is voluntary, children must work to maintain the friendship, must learn to take the other's perspective, and may be indulged less than is the case within the family. Because the relationship is forged between equals, children and adolescents often "cooperatively co-construct" plans of action, rather than receiving directives, as is more often the case within the context of parent–child interactions. Finally, because parents typically have such high levels of interest and investment in the child's future, communications often have a judgmental quality that contrasts with the more accepting stance of one's same-age peers. These factors influence other dynamics that are often found within friendships, such as feelings of intimacy and identification, and willingness to disclose one's fears and concerns.

Sociologists have also studied friendships extensively, with much of this research focused on the adolescent period. Although some research has examined basic dynamics within friendship, more attention has been given to problematic outcomes such as delinquency that may be subject to peer influences. Particularly in early investigations, excessive reliance on peers was viewed as problematic for youth, as these liaisons were seen as replacing the influence of parents. Although research did document a modest relationship between time spent with peers (particularly unstructured time) and problem outcomes such as delinquency, many studies also established that parents continue to be influential in the lives of children and adolescents. Contemporary theorizing has moved away from the tendency to position these two social relationships in fundamental opposition to one another, and also increasingly highlights that friends can be a positive or a negative influence on the developing child.

The interpretive perspective on childhood and adolescence is another influential theoretical perspective that presents an integrated perspective on parent and peer

influences. This line of theorizing, elaborated by Corsaro (2003) in connection with research on preschool and grade school children, and Eder (1995) in investigations of middle school youths, focuses on the ways in which interaction and communication with one's same-age peers creates the immediate cultural world that children inhabit. Through talk and play with friends and other age-mates, children develop unique understandings about what will be esteemed, valued, or subject to ridicule, and also learn about social rules and obligations. As young people interact with one another, they necessarily draw from the larger culture (e.g., parent's attempts to socialize them in a particular direction) but inevitably do so in a creative, selective manner. As a result, children's worlds reflect but never duplicate that of their parents and other adults. Research in this tradition is important because it focuses attention not only on the general importance of interacting and communicating with friends but also on the content of this communication.

## SOCIODEMOGRAPHIC CHARACTERISTICS OF CHILDREN AS INFLUENCES ON FRIENDSHIP PATTERNS

Developmental psychologists in particular have frequently explored the influence of age on friendship patterns, but there is also increased scholarly interest in the ways in which the child's other social statuses and locations, such as gender, social class, and race/ethnicity, influence the nature of friendship processes.

It is often stressed that the adolescent period is the phase of life when peers assume increased importance, but researchers have found that youngsters as early as preschool age show much interest in forging connections with their peers. Corsaro (2003), in observations of preschool-age children, frequently heard comments such as "We're friends, right?" a question that hints at both the importance and not-to-be-taken-for-granted nature of this type of relationship. Certainly researchers have documented that friendships become more complex and intimate as children mature. Early relationships often have a strong activity focus, whereas communication and intimacy loom larger in many adolescent relationships.

Nevertheless, research also shows that even children's early forays into the world of friendship are not only about the game that is being played but also about affection, perceived obligations, and a concern with maintaining these important connections. For example, Corsaro noted that while preschool children may sometimes refuse to include another child in their ongoing activities, what seems to be a selfish act often stems from their intense focus on play routines that involve sharing and reciprocity. Research on the adolescent period is much more voluminous, however, and clearly shows that friendships become an especially important part of life during this phase of development. Opportunities (greater freedom of movement) and challenges (concerns about appearance, the opposite sex, being popular) associated with adolescence make close friends particularly valued as a safe haven or what Call and Mortimer (2001) describe as "an arena of comfort" during this time.

A significant body of research also has documented that gender influences the character of friendships as well as what is communicated within friendship circles. Even in childhood, young girls more often than boys engage in dyadic (or one-on-one) play, and talk and sharing of secrets is considered more central to developing relationships. Researchers have contrasted this with boys' stronger activity orientation, often focusing on games such as baseball or basketball that require a somewhat larger number of participants. Research has shown that during adolescence boys are less likely to engage in intimate self-disclosure with friends, gendered processes that potentially influence dynamics of later relationships (e.g., marriage relationships). Ethnographic studies by Eder (1995), Fine (1987), and Adler and Adler (1998) add to this portrait, emphasizing that boys' communications typically reward toughness and punish displays of vulnerability or weakness. Youniss and Smollar (1985), however, also highlighted that the lower scores of boys on intimate self-disclosure to friends was primarily attributable to the lack of intimacy reported by about 30% of their sample of adolescent boys. This finding suggests the importance of examining variations within samples of boys and girls, rather than focusing exclusively on aggregate gender differences.

Fewer studies have examined the influence of such factors as socioeconomic status and race/ethnicity on children's and adolescents' friendships, but research suggests more attention to these factors is warranted. Two alternative hypotheses about the likely influence of social class position have developed in the scholarly literature. Eckert's 1989 ethnography of a U.S. high school, for example, focused on ways in which socioeconomic factors play into adolescent social hierarchies. She observed that middle-class "jocks" typically have higher status than youths with lower status backgrounds, who are more likely to be considered "burnouts." Eckert hypothesized that friendship relations within these larger status groups differed as well. She suggested that middle-class youths were relatively more instrumental and willing to shift friendships as they became involved in different extracurricular activities or moved on to college.

Focusing on burnouts, who often lacked involvement in structured activities and were less likely to succeed along traditional lines, Eckert observed that their

***Play Time.*** *Through talk and play with friends, children develop unique understandings about what will be esteemed, valued, or subject to ridicule.* AP IMAGES.

friendships were longer lasting and assumed greater importance. A contrasting view is that experiences associated with higher socioeconomic status may provide resources and stability that allow young people to develop and maintain more intimate ties with friends. For example, lower-class youths are more likely to make frequent residential and school moves, and thus may have difficulty sustaining particular friendships. Living in unsafe neighborhoods has also been associated with a general wariness and lack of trust that, while an effective survival strategy, may also inhibit the development of highly intimate relationships.

Much of the research on race/ethnicity effects has focused on the degree to which children and adolescents form interracial ties. Research has demonstrated strong preferences for same-race and same-ethnic friendships, with recent studies documenting that Hispanic and Asian youth are more likely than others to exhibit heterogeneity in friendship choices. Researchers have shown that the racial composition of schools is a significant influence on friendship experiences. Moody (2001), for example, found the highest levels of friendship segregation in moderately heterogeneous schools, but that very heterogeneous schools were associated with more integration of friendship ties. In addition, in those schools in which extracurricular activities were integrated, friendship segregation was also less pronounced.

Because this research shows that a majority of friendships are intraracial (or within one's own racial group), however, more research is needed on the everyday friendship experiences of youths who vary in their race and ethnic characteristics. As in the case of social class effects, contradictory hypotheses have been suggested, and the research evidence that bears on these ideas is less than definitive. Early on some researchers focusing on African-American youth developed a compensation hypothesis, suggesting that family structure differences and barriers to traditional success may foster an excessive dependence on peers. Some quantitative research, however, documents that African-American youth compared to White youth maintain a stronger family orientation, report spending less time with friends, and perceive less peer pressure. Some effects of race may ultimately be traced to socioeconomic status differences, but other differences in

the character of friendship ties may stem from family or neighborhood effects and other cultural preferences. More research is also needed on friendship patterns of Hispanic and Asian-American youth, where forging links to these broader patterns is similarly important to pursue.

## FRIENDSHIP EFFECTS ON DEVELOPMENTAL OUTCOMES

Researchers have shown that simply having friends is associated positively with children's emotional health and self-esteem, and that more socially competent youth also do better in these respects. Sociologists in particular, however, have focused much attention on the specific characteristics of friends as influences on a range of attitudes and behaviors. One of the challenges in this line of research is that while studies have repeatedly demonstrated that children and adolescents share similarities along a number of dimensions, what is less certain is whether this reflects an instance of "birds of a feather" flocking together or an actual influence process. Studies that follow young people over a period of time are best positioned to answer these questions, as they can distinguish between the initial similarity of friends and whether they tend to become more similar over time (findings that support the idea of mutual influence).

Research has shown that even when relying on longitudinal or multiwave studies, the delinquency of friends emerges as a significant predictor of a child's own delinquency and academic attainment is influenced by friends' orientations toward school and school performance. And while heterosexual relationships involve unique dynamics that transcend the peer context, research shows that affiliation with sexually permissive peers is a strong correlate of an adolescent's own sexual behavior choices. Even what appear to be individualistic behaviors such as suicide may be influenced by peer factors. For example, Bearman and Moody (2004) showed that having a friend who committed suicide was associated with a youth's own likelihood of having suicidal thoughts.

Although the research on peer effects generally documents effects of friends' attitudes and behaviors on a range of outcomes for both male and female adolescents, some research has noted gender differences. In a 2006 article, for example, Riegle-Crumb, Farkas, and Muller demonstrated that the characteristics of high school girls' friends influenced their math and science attainment, but this friendship effect was not found for boys. In addition, some research has found that involvement in mixed-gender groups decreases boys' involvement in delinquency, but tends to amplify the risk for girls.

## FUTURE DIRECTIONS

The above review of current knowledge about child and adolescent friendships suggests some areas that warrant additional investigation. For example, it will be useful to explore changes in the way young people "do" friendship, from the increased reliance on e-mail and text messaging, to the less rigid lines between friendship and dating relationships. Because many of the foundational studies in this field have relied heavily on convenience samples of White youths, increased attention to the friendship experiences of youths varying in race/ethnicity and social class are especially needed. More research on friendships of sexual minority youth is also warranted, as the focus on sex, identity, and problem behaviors such as drug use has not provided a comprehensive understanding of the lives of gay, lesbian, and bisexual adolescents.

Another critical area to pursue involves more explicit study of linkages between the child's friendships and other social groups and organizations. For example, while the study of popularity and cliques has developed as a separate area of inquiry, researchers have noted that the child's social niche (i.e., whether popular, "alternative," or "druggie") channels friendship opportunities and potentially also influences the dynamics within these relationships. And while adolescence is characterized by freedom of movement relative to the greater supervision typical of childhood, additional research is needed on ways in which parents continue to influence adolescents' friendship choices. To illustrate, in a 2006 article Knoester, Haynie, and Stephens reported that the quality of the parent–child relationship, whether the parent chose a neighborhood because of its schools, and parental supervision all influenced whether the child was involved in a delinquent friendship network.

Because prior research has amply demonstrated that friendship experiences influence adolescent involvement in various prosocial and problem behaviors, a logical next step is to explore in more detail the interpersonal dynamics that foster these observed similarities between young people and their friends. Are there developmental shifts in the mechanisms underlying peer influence? How do male and female friendship groups differ in the ways in which friends influence one another? Warr (2002), focusing specifically on delinquency, outlined some potentially important mechanisms, such as the fear of ridicule and expectations of loyalty, but these need to be more systematically investigated. In addition, the dynamics involved in encouraging academic attainment or other outcomes might be distinctive in a number of important respects.

Finally, research on friendships, including studies of these influence processes, could benefit from theory and research that takes into account the element of human agency and capacities for change that are widely recognized but more difficult to study empirically. Many treatments of peer pressure depict the young person as essentially a passive recipient of these influence attempts.

A more comprehensive assessment would incorporate a view of adolescents as actively involved in their own attempts to influence, reacting selectively and creatively to communications from their friends, and sometimes changing networks to line up with new perspectives or life course changes.

**SEE ALSO** Volume 1: *Bowlby, John; Dating and Romantic Relationships, Childhood and Adolescence; Interpretive Theory; Peer Groups and Crowds; School Culture; Social Capital; Social Development; Youth Culture;* Volume 2: *Friendship, Adulthood; Social Support, Adulthood;* Volume 3: *Friendship, Later Life.*

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*Peggy C. Giordano*

# G

## GAMBLING, CHILDHOOD AND ADOLESCENCE

**SEE** Volume 2: *Gambling.*

## GANGS

The study of gangs as unsupervised peer groups has long centered on problems of adolescence. As most youth in gangs age, research has found, they "mature out" and move on to a conventional life, putting violent and criminal behavior behind. Some recent research, however, is reexamining this bedrock idea. The global era has brought a new urgency to understanding the life course of gang members.

### A BRIEF HISTORY OF GANG RESEARCH AND THEORY

The study of gangs formally began in Chicago in the 1920s with the classic studies of Frederic Thrasher and the Chicago School of Sociology. For Thrasher, the gang was an adolescent experience, *interstitial* in both a spatial and temporal sense. Gangs formed in immigrant slums from second-generation youth, the children of immigrants, who were "in between" the controls of the old world and the freedoms of the new. For Thrasher and most subsequent gang researchers, the study of gangs has been mainly concerned with unsupervised, adolescent, male peer groups: how they form, behave, and eventually end.

The social scientists of the Chicago School discovered in the ecology of the industrial city patterns of behavior by youth in "disorganized," immigrant communities. Gangs formed from second-generation boys who rebelled against old world cultural traditions and controls, had loose ties to school and other conventional institutions, and were seduced by American culture. Early research in Los Angeles followed this model in studying Mexican immigrants None of the early studies had much to say about girls, because the gang experience was defined fundamentally as male adolescent alienation.

In the 1950s gangs started to draw more public attention. To counter periodic moral panics, the criminologist Walter Miller argued that whereas the numbers of gangs were relatively constant over time, it was *media attention* that varied. But he also sounded the alarm in several law enforcement surveys, indicating that the problem of gangs and law-violating groups had become national in scope, at least in large cities. The turbulent 1960s saw an ongoing theoretical dispute over the relative role of "lower-class culture" versus variations in neighborhood "opportunity structures" that mirrored liberal/conservative policy debates. An empirical test of theories by James F. Short and Fred L. Strodtbeck (1965) reaffirmed the salience of Thrasher's prior *group-process* perspective of adolescent behavior. Unresolved, however, both theoretically and in studies based on direct observation, was whether this process in a gang necessarily included criminality.

Although Albert Cohen's *reaction formation* thesis; i.e. his notion of *corner boy* behavior as a repudiation of *college-boy* norms, was not universally accepted, his focus on the adolescent, lower-class male epitomized the world

***Gangs.*** *Three members of the Crips brandishing rifles.* GALE, CENGAGE LEARNING.

of gang research at the time. Minimized in nearly all this research was gender and ethnicity. Most studies concluded that gangs, as a male adolescent problem, would ultimately fade away once youth transitioned to adulthood in an improving economy. The optimism of modernity informed this era of gang research.

However, gang violence sharply increased in the 1960s and 1970s, raising questions about this confidence. Miller noted in 1975 that most gangs in the United States were White, but by the 1980s and 1990s research focused on the growing number of Black and Latino gangs. White gangs dwindled as their ethnic groups assimilated and moved to the suburbs away from their old, urban neighborhoods. The gang problem became intertwined with issues of race, crime, social protest, and the city.

Joan W. Moore (1978), almost singlehandedly, paid special attention to females, and her work framed gangs within the history of East Los Angeles barrios and the persisting conditions of poverty and inequality. She examined an issue of great importance for later research: Several generations of gangs in East LA, dating back to the 1920s, had not disappeared by the 1960s, but had become, in her words, ''quasi-institutionalized.'' Jacobs' study of Stateville, a prison outside Chicago, also noted adult influence in gangs and a protracted, close relationship between the prisons and the streets. A few years later Campbell did a seminal study of female gangs in New York, though the problems of girls and gangs remained marginal to criminology.

William Julius Wilson's (1987) analysis of deindustrialization and changes in black ghetto behavior formed a new context for the study of gangs. John Hagedorn's 1988 study of Milwaukee gang formation, along with Carl Taylor's study of male and female gangs in Detroit, Mercer Sullivan's comparative neighborhood study in New York, and Diego Vigil's study of Los Angeles ''Barrio Gangs'' looked at the impact of economic restructuring on gangs, but also at the history of local African American and Latino communities. These studies found that the gang experience, particularly for males, was no longer limited to adolescence. The lack of good jobs had been met by a parallel growth in the underground economy and the subsequent organization of drug sales by urban minority gangs. Drug selling, to cite Sullivan's book title, was just another way of ''Gettin' Paid.'' Padilla summed up this approach with his book, ''The Gang as an American Enterprise.''

The crack wars of the late 1980s and early 1990s brought another surge of interest in studying gangs and attention to gang prevention and control programs. The National Institute of Justice (NIJ) funded a wave of gang research, much of it in St. Louis, and research began to look at gangs in many cities and of many different ethnic groups. The National Youth Gang Center (NYGC) followed up on Miller's earlier surveys by estimating the extent of the gang problem in the United States. Their surveys, mainly of law enforcement personnel, found nearly a million gang members in the mid-1990s, followed by gradual declines. In 2007, the NYGC estimated that there were about 25,000 gangs with a total of three-quarters of a million gang members, with more Latino gangs and gang members than other ethnicities. Their estimates, it is widely recognized, are unverifiable. What appears to be certain is that U.S. cities, large and small, since the late 1980s have had an identifiable gang problem that varies in scope and intensity but shows few signs of going away.

The rising rates of violence and increasing numbers of gangs in the 1990s led to a more intense focus on gang intervention and suppression programs. Malcolm Klein (1995) argued against a narrow law enforcement response, finding that repression strengthened, not weakened, gang cohesion. Similarly Irving Spergel argued for comprehensive models of gang intervention that slanted away from a one-sided reliance on law enforcement. Both Spergel and Klein, leading scholars on the topic, defined the gang traditionally as a basically male adolescent phenomenon and sharply distinguished it from "drug posses," prison gangs, and other, more adult-involved, street groups.

## COMPARATIVE STUDIES OF GANGS

Girls' gang experiences continued to be neglected, though some efforts to raise the profile of female gangs were made (e.g. Chesney-Lind & Hagedorn, 1999). While law enforcement estimates of female gang participation are typically low, careful studies of neighborhoods in Los Angeles and Milwaukee found more than a third of all adolescent gang members were female. Significantly, however, one of the major differences between female and male gang involvement was the growing prevalence of adult roles in gangs for males. As girls aged, their role of mother pushed the role of gang member to the side in ways that for males, the role of father did not.

Most gang research continued to be based on the theory of the lack of controls on boys in poor, "disorganized" communities. For example, a typical definition drawn from a National Youth Gang Center online description of the parameters of the gang problem states: "The terms 'youth gang' and 'street gang' are commonly used interchangeably and refer to neighborhood or street-based youth groups that are substantially made up of individuals under the age of 24" (Institute for Intergovernmental Research, 2008).

While the vast majority of gang members have always been juveniles, researchers in several cities have been exploring a more institutionalized gang that persists for decades and has considerable adult membership. Gangs in Chicago, as Conquergood, Venkatesh, Hagedorn (2008), and others described, were long standing presences in nearly every African-American, Mexican, and Puerto-Rican neighborhood in the city. Similarly, African-American and Mexican gangs in Los Angeles have persisted since the 1960s. Multi-generational gangs have become part of the landscape in many U.S. cities and present new challenges for neighborhood youth.

Such institutionalized gangs adapt to changing conditions and offer more to youth than just "gettin' paid." Gang rituals and symbols provide meaning, and members spin folklore or "rationalized myths" about gang history. Such gangs give solidarity and security for youth and offer a pathway to a future that includes continuity within their neighborhood spaces. Even prison has become an extension of the neighborhood, with home-boys or allied gang members in nearly every prison expected to help out any new inmate from the "hood." Spaces for some gangs, such as MS-13 or the Latin Kings, are transnational; their gangs now exist simultaneously in multiple cities, from Los Angeles or Chicago to San Salvador or Madrid. Gangs in both Chicago and Los Angeles have also occasionally dipped into politics and demonstrate what urban scholar Saskia Sassen calls a "presence," or a potential for social or political action.

This extension of adolescent gang life into adulthood is a global trend within urban spaces of *social exclusion*, a *Fourth World* to use Castells' (2000) term. The majority of the world is now urban, with nearly half of its population under the age of 25. More than 500 million youth live on less than $2 per day, the standard for poverty. More than 8 in 10 of the world's youth live in the developing world, and Africa alone may have 300 million slum dwellers. Mike Davis' (2006) "planet of slums" implicitly means a world of gangs, as groups of armed young men occupy ghettoes, favelas, and townships across the globe and represent a very real, alternative future for many youth.

Literature on "children in organized armed violence" or *coav* has studied comparatively the problems of youth from gang members to child soldiers growing up in cities across the world. Luke Dowdney's (2003, 2005) studies of Rio de Janiero drug factions highlight

the problems children face growing up in a world of gangs. Diverse studies have found that many poor youth are turning to a variety of oppositional groups, including gangs, ethnic militias, drug cartels, and religious police. The lines between these groups have become harder to draw. Comparative studies of *coav* from Chicago to Cape Town to Mindanao to Rio de Janiero have established the global dimensions of this issue.

U.S. criminologists' approach to gangs has also taken an international comparative turn, but only as far as Europe. The Euro-gang research agenda of Mac Klein et al. has transplanted American concepts and concerns about adolescent gangs across the Atlantic to include Europe's "troublesome youth groups." Whereas European cities currently have few institutionalized gangs, conflict in the banlieues of Paris, Turkish gangs in Berlin, Afro-Caribbean gangs in London, and the emergence of Russian and Eastern European crime groups portend what may be a different, bleaker future. For example, Gloria La Cava and Rafaella Y. Nanetti report that in Albania the criminal economy includes up to 25% of the young men aged 18–25 and has become a "structural feature in Albanian life"(La Cava & Nanetti, 2000, p. 39 ). This startling finding exemplifies the new problems for the life course of youth gang members in many areas of the world.

## FUTURE DIRECTIONS

Future directions for research include a more complete understanding of how institutionalized gangs and other armed groups have an impact on the life chances of children and youth. While the conventional problems of alienation, rebellion, and gender roles are present for adolescents everywhere, globalization has left youth in some cities with even more pressing problems. Although not all cities have institutionalized gangs, many others do, and the indication is that such groups are likely to increase. Young women may play a more involved role in gangs, though there is still very little research on girls' and women's gang lives. The political involvement of the Latin King and Queen Nation in New York City in the 1990s and their integration of women into their leadership has received little attention outside the important study by David Brotherton and Luis Barrios (2003). In some Colombian militias, women play a significant, and armed, role, although this does not appear to be a general pattern.

This focus on institutionalized gangs also highlights race and ethnicity as well as the importance of youth culture. While traditional gang research has deemphasized the salience of race, the world has been wracked by ethnic conflicts that include gangs and other groups of armed young men. Gang youth make meaning from their ethnicity and religion, and their music, hip hop, is one of the strongest cultural forces in the world in the early 21st century. The nihilistic lure of gangsta rapper Snoop Dogg tells youth to "keep your mind on your money and your money on your mind." But youth, and their gangs, have more on their mind than money. One focus of research in the coming years will be to better understand the cultural meaning of various "resistance identities" of youth and their gangs as they attempt to make meaning out of a dangerous and forbidding world. As youth proceed along the life course in a "planet of slums," research needs to focus on the gang and similar armed groups as more than a transitional form.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Crime, Criminal Activity in Childhood and Adolescence; Theories of Deviance.*

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# GAYS AND LESBIANS, YOUTH AND ADOLESCENCE

Gay and lesbian youth of the early 21st century are able to "come out" (i.e., to disclose their sexual identity to others) earlier than previous generations of sexual minority youth, find more supportive environments at schools through clubs (gay-straight alliances) and inclusive school policies, and have experienced a societal shift toward greater acceptance of sexual diversity. This picture is optimistic for future generations of gay and lesbian youth; at the same time, risks unique to sexual minorities are a part of daily life for many gay and lesbian youth. Same-sex attracted youth are more likely to attempt suicide (Russell, 2003) and experience increased rates of victimization at school due to sexual orientation (Morrow, 2004). These risks are beginning to be addressed through various media outlets (e.g., Kate Bornstein's book, *Hello Cruel World: 101 Alternatives to Suicide for Teens, Freaks, and Other Outlaws* (2006), or informative, supportive Internet resources for gay and lesbian youth, such as *The Safe Schools Coalition* Web site.

The research on gay and lesbian youth has mirrored society: Gays and lesbians have been a stigmatized population among youth, and until recently have been invisible in the daily lives of their families, schools, and communities, and also in the scientific literature. The first scientific attention to gay and lesbian youth came in the early 1970s; it took another 15 years for there to be more than a handful of published medical studies, each of which documented significant health risk among gay and lesbian adolescents. Then, in the mid-1980s, coinciding with the beginning of the HIV pandemic, attention to gay and lesbian youth began to grow.

Early studies focused almost exclusively on medical health risks and were based on what are termed "convenience" samples (even though such studies were hardly "convenient" for those pathbreaking researchers): Youth were recruited to participate in studies through programs that served the needs of gays and lesbians. The result was a decade or more of studies based on the experiences of youth that self-identified as gay and lesbian, many of whom were seeking services for the emotional and behavioral health challenges that the researchers were attempting to understand. Thus, although these early studies almost certainly overestimated the magnitude of problems in the "general" gay and lesbian youth population (if indeed there exists a "general" population of gay and lesbian youth), they were important for establishing the existence of health disparities for gay and lesbian youth, thereby focusing attention on this hitherto ignored population. Since the mid-1980s, attention to this population has grown, and has been characterized by several themes: the definition and study of the population, the development of sexual orientation and identity, and the tension between risk and resilience in studies of gay and lesbian youth.

## DEFINING AND STUDYING THE GAY AND LESBIAN YOUTH POPULATION

The early studies were defined by adolescent *sexual identity*: conception and labeling of oneself as gay, lesbian, bisexual, or heterosexual (Diamond, 2003). Yet most individuals come to understand same-sex sexuality before self-labeling or disclosing sexual identity. *Sexual orientation* is defined as one's sexual or emotional attractions to other persons. These attractions may be to the same sex (homosexual orientation), the other sex (heterosexual orientation), or to both the same and other sex (bisexual orientation). Realization of this self-concept is outwardly expressed as a sexual identity; alternatively, sexual orientation may be privately acknowledged but not publicly expressed, or the individual may be unaware of it consciously.

*Sexual behavior* refers to actual behavior between people. Sexual behavior may or may not be consistent with a person's sexual orientation or identity. It is important to note that diversity in *gender identity* includes youth who identify as transgender. Transgender youth may identify with a gender that is different from their biological sex; alternatively, they may not identify as either male or female, but rather with a combination of femaleness and maleness (Ryan & Futterman, 1998). Awareness about transgender identity has grown, along with increasing numbers of youth who self-identify as transgender. Since the early 1990s, researchers' attention has often focused on a broadly defined group of youth—sometimes termed "sexual minorities" (Russell, 2005)—including those who are gay, lesbian, bisexual, and transgender (GLBT).

Identifying and studying dimensions of sexuality (orientation, identity, and behavior) is challenging, particularly if the focus is on the adolescent years, during which time these dimensions are in development. The first studies relied on self-reports of sexual identity, and this approach continues to be important. It continues to

***Gay–Straight Alliance Members.*** *The Gay–Straight Alliance, a group duplicated in high schools and colleges around the U.S., provides support and education for gay and straight students.* © ED QUINN/CORBIS.

be a challenge, however, to define sexual and gender identity because of historically changing cultural meanings of sexual identity labels: In the early 21st century, same-sex identified youth often use labels such as *queer* or *questioning*, or they refuse to use a label at all (Cohler & Hammack, 2007; Diamond, 2003). Sexual orientation has been studied through questions about sexual attractions, romantic attractions, emotional preferences, and multiple other indicators; there has not been strong measurement consensus for studying sexual orientation, although one review has provided guidance (Saewyc et al., 2004). Finally, some studies have relied on self-reports of same-sex sexual behavior to categorize the study population (Saewyc et al., 2004). Regardless of the measurement approach, several decades of research on sexual minority youth has been accumulated.

Given the challenges associated with identifying the population to be studied, and the historical changes in visibility and acceptability of GLBT people and identities, there is no definitive estimate of the proportion of the general adolescent population that are sexual minorities. Across multiple studies, however, the size of the adolescent sexual minority population has been found to range between 1% and 8% of the general population (Saewyc et al., 2004). At the same time, awareness of same-sex sexuality in adolescence has undoubtedly grown since the mid-1980s, and it is clear that there are now possibilities during adolescence that did not exist for older generations for sexual minority people to come out. Scholars have suggested a trend of earlier ages for coming out among cohorts in the beginning of the 21st century (Cohler & Hammack, 2007; Floyd & Bakeman, 2006; Ryan & Futterman, 1998). One study found that individuals from a cohort who self-identified as gay or lesbian as adolescents during or after 1988 did so at younger ages compared to an earlier cohort that came out prior to 1988. The more recent cohort reported disclosure at an average age of 18 to a nonparent and 19 to 20 to a parent, whereas for the older cohort the average age of disclosure was 20 to nonparents and approximately 23 to parents (Floyd & Bakeman). The difference in coming-out ages for these cohorts is approximately the same as those reported in earlier work (Ryan & Futterman).

Explanations for these cohort differences rely on historical changes in social attitudes toward gays and lesbians, including the increased visibility of lesbian and gay people and issues in the media, and the public attention to multiple GLBT issues, including "gays in the military," marriage for same-sex couples, and efforts to legislate employment nondiscrimination protections. Ryan and Futterman (1998) note that contemporary youth have access to GLBT role models (e.g., popular television programs such as *Will & Grace*, movies such as *Brokeback Mountain*, and sports figures such as Martina Navratilova) along with greater access to information regarding sexual orientation; these factors may allow sexual minority youth to feel more comfortable with their sexual identities, and therefore be more likely to come out than in the past.

## SEXUAL ORIENTATION AND IDENTITY DEVELOPMENT

The development of gay and lesbian identity was originally conceptualized in stage models (Beaty, 1999). Several stage models were proposed in the 1970s and 1980s, each of which included the progression from feeling different, to coming out, to accepting, and finally integrating one's identity as gay, lesbian, or bisexual. These models established coming out as the primary task of adolescent identity development (Morrow, 2004). However, stage models do not accurately describe the daily experiences of GLBT youth (Diamond, 2003, 2005). For example, Diamond (2005) identifies important gender differences and acknowledges prior studies that show that the timing and sequencing of these stages may not be consistent for all youth. Thus, research should examine diversity among sexual minority youth in identity development, as well as the role of identity development experiences over the life course. It is generally regarded that a stages approach to the study of sexual identities is not the best conceptual framework. Nevertheless, the elements of these models—feelings of difference and awareness of sexual orientation, disclosure of sexual identities, and self-acceptance—continue to have meaning for understanding the experiences of GLBT adolescents (D'Augelli, 2005).

## RISK OR RESILIENCE?

Without question, the emphasis in research has been on health and behavioral risk in the lives of sexual minority adolescents. Specifically, multiple studies using different measures and methods and in multiple countries document compromised health and well-being for adolescents based on same-sex sexual orientation, identity, or behavior, and adolescent transgender identity. In one sense, the focus on risk is consistent with the larger field of adolescent research, which historically has been concerned with identifying and preventing negative outcomes (although attention to positive development has grown since the late 1990s). Further, while the earliest studies focused on mental and physical health challenges of sexual minority youth, this emphasis was only reinforced by the imperatives of the HIV/AIDS crisis of the late 1980s, which prompted much of the research attention that began during that time. The inertia of this field of studies gained momentum and continues to focus on negative health and problem development. Yet, in spite of what many agree is an overfocus on risk, research continues to indicate that sexual minority youth remain a group that is at high risk. Clearly there is great need for studies to understand risk behaviors or statuses among adolescents in order to inform prevention and intervention; at the same time, additional research is needed on protective factors and on the development of positive outcomes (Russell, 2005).

Little noticed is that the majority of sexual minority adolescents grow up to be healthy and contributing members of society, despite societal prejudice and discrimination. The healthy development of the majority of GLBT youth suggests that, like many adolescents, they are resilient (Russell, 2005). What promotes healthy development and resilience? Promising advances have contributed to a shift from an exclusive focus on risk to consider the success and empowerment of GLBT youth (Cohler & Hammack, 2007).

Nevertheless, replacing negative outcomes with positive ones is not the full solution. Additional research is needed on the mechanisms that operate in the lives of sexual minority adolescents, prompting optimal or problematic adjustment. Consistent with the "minority stress" model (Meyer, 2003), a framework of normative versus unique risk and protective factors offers the possibility to clarify research questions and practical goals (Russell, 2003, 2005). Many of the risk factors and outcomes that have been described for sexual minority adolescents are normative—they are risks for all youth, such as compromised family or peer relationships, mental health problems, or substance abuse. New research is needed to identify the dimensions of risk or protective factors that are unique to sexual minority youth. What are the specific attitudes, behaviors, comments, or interactions that make family and peer relationships difficult for sexual minority youth? Are there factors unique to sexual minority adolescents that trigger depression or substance abuse? Alternatively, what specific interactions or behaviors might parents, siblings, and friends engage in that could promote healthy development? What factors unique among sexual minority adolescents might protect them from mental and behavioral health risk?

## FUTURE DIRECTIONS

Questions of resilience are central in the newest generation of studies of sexual minority youth, and future studies will continue to identify distinctive experiences that protect or make them vulnerable, and that may be efficacious for intervening to prevent compromised health and to promote positive development. One trend in the research that will aid in accomplishing this goal is a shift from thinking about risk exclusively at the individual level to identifying sources of risk and protective factors in the broader environment in which adolescents grow and develop. Influenced by *ecological systems theories* of human development, studies in the early 21st century of sexual minority adolescents have focused on the important contexts that shape adolescents' lives: their families, schools, faith, and peers. Through studying these developmental settings, researchers are moving beyond documenting risk to identifying and contextualizing the sources of risk. Specifically, GLBT youth are not depressed because they are GLBT, but because they experience societal prejudice and discrimination at home, in school, in their faith communities, and among peers.

Much of the focus remains on risk, but a contextual resilience approach is promising. For example, it is simply assumed that GLBT youth will have compromised relationships with their parents; challenges in parent–adolescent relationships have been shown to predict maladjustment among GLBT youth (Morrow, 2004). Given the changes in public visibility and attitudes about GLBT people and issues over the course of past decades, some families may be accepting of GLBT adolescents, yet the role of accepting families in promoting positive development has not been explored.

Several other areas are deserving of attention in the research on sexual minority youth. Based on several decades of research, a consensus has emerged regarding sexual minority health disparities in adolescence and in adulthood. Very little is known, however, about the transition from adolescence into adulthood by sexual minorities. The study of trajectories of development will be crucial for a full understanding of the role of risk in

the lives of sexual minority adolescents. For example, it is presumed that GLBT adolescents who experience compromised mental and behavioral health begin a trajectory that follows them into adulthood. Yet, given that contemporary self-identified GLBT youth are among the first cohorts to navigate adolescence with GLBT identities, is it possible that their adolescent experiences might provide the basis for learning to cope with GLBT stigma? Could contemporary cohorts of GLBT youth be at lower risk in 10 to 20 years for the health disparities seen among GLBT adults at the beginning of the 21st century? Longitudinal studies that follow GLBT youth into adulthood are needed to better understand the lasting influence of adolescent experiences on adult well-being.

New research is also needed on methods for identifying and studying sexual minority youth. The use of the Internet by youth and by researchers has exploded. Once viewed as suspect, online approaches to identifying and including sexual minority youth as research participants are now more common. Online research methods provide remarkable opportunities for the study of a marginalized, often invisible, and small population. At the same time, many questions about methodological strengths and weaknesses remain. An additional methodological challenge in studying all adolescents is the protection of research participants; this issue is particularly important for "at-risk" populations. The issue is compounded in the study of sexual minority youth because of the risks of disclosure: Seeking parental consent for research participation typically poses more risk for GLBT youth than does participation in social or behavioral studies. Innovations in methods for seeking adolescent consent for research participation that assure subject safety are needed, and the efficacy of new approaches needs to be empirically tested.

There is much still to learn about the health and development of sexual minority youth. In ending, it is important to shift perspective and acknowledge a final reason that research on sexual minority youth has been and will continue to be important: What is learned contributes to a better understanding of the health and development of all young people. This is not a trivial point because focusing on marginal or previously invisible populations allows the possibility to understand developmental process in the general population of adolescence in a new light, at times pointing to areas or topics that had been unexamined because they were thought to be "natural" or "normal." Research on GLBT identity development has, for example, made it possible to conceptualize heterosexual identity development (Striepe & Tolman, 2003). Thus, research on sexual minority adolescents and other marginalized or understudied populations is important not only for serving the needs of their group but also for understanding normative development in adolescence.

**SEE ALSO** Volume 1: *Dating and Romantic Relationships, Childhood and Adolescence; Identity Development; Sexual Activity, Adolescent;* Volume 2: *Gays and Lesbians, Adulthood; Socialization, Gender.*

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# GENDER AND EDUCATION

Discussions and research concerning gender and education have traditionally focused on women's disadvantages throughout the educational system. In 1992 the American Association of University Women (AAUW) published their influential report, *How Schools Shortchange Girls*. The AAUW report spurred a great deal of research by social scientists and discussion in popular media about the status of women and girls in education. Since its publication, however, the tide has been changing. Social scientists are now focusing on the gender gap in education in which girls are advantaged, and the media is concerned about the plight of boys, as seen with the 2006 *Newsweek* magazine cover story titled "The Problem with Boys." Regardless of the current concern about which gender is more or less disadvantaged, the question of gender differences in education remains interesting to the public and of primary concern to researchers and policy makers.

## TEST SCORES, GRADES, AND COURSE-TAKING

Gender differences in academic performance and educational trajectories begin as early as elementary school. In earlier grades, boys and girls have relatively similar scores on standardized tests of math and reading, but as children move through schooling, differences emerge (Willingham & Cole, 1997). By high school, boys on average score higher on mathematics tests, whereas girls on average score higher on reading tests. There is disagreement, however, on whether gender differences in test scores are declining over time. Some researchers argue that gender differences have declined in recent decades, whereas others argue that differences have remained stable since the 1960s.

Despite boys' consistent advantage on standardized math tests, girls receive better grades in school than boys. As early as the 1950s and 1960s, girls earned higher grades than boys in high school. This trend continues throughout all grades in school, and even in college; girls earn higher grades than boys in all subjects, including math and science (Perkins, Kleiner, Roey, & Brown, 2004). In addition to earning higher grades than boys, girls show better reading skills than boys as early as kindergarten. Boys have more problems with reading throughout elementary school and are more likely to be diagnosed with reading disabilities, mental retardation, attention disorders, dyslexia, and speech problems than girls (Trzesniewski, Moffitt, Caspi, Taylor, & Maughan, 2006). Girls also demonstrate better social skills and are rated by their teachers as having better classroom behavior than boys (Downey & Vogt Yuan, 2005).

Historically, significant differences existed in the types of course work boys and girls took in high school, with boys taking more rigorous math and science courses than girls. These differences, however, have disappeared. In the early 21st century, girls and boys take the same number of rigorous math courses, and girls are more likely than boys to take biology and chemistry courses by high school graduation (Gallagher & Kaufman, 2005;). Girls also take more Advanced Placement (AP) and college preparatory courses and are more active in extracurricular activities than boys, with the exception of sports participation, where girls lag behind boys considerably (Freeman, 2004). Additionally, girls now have higher educational expectations than boys. In the 1950s and 1960s, boys had higher educational expectations than girls (Marini & Greenberger, 1978). Since the 1980s, however, girls report higher educational expectations than boys and are more likely than boys to expect to complete college in the United States and many other countries (Shu & Marini, 1998).

## EDUCATIONAL ATTAINMENT

Beginning in kindergarten, girls and boys have differing educational trajectories. Parents are more likely to delay boys' entry into kindergarten. Boys comprise 60% of students who enter kindergarten one year after they are eligible, and boys are more likely than girls to repeat kindergarten. Throughout elementary school, boys are more likely to repeat a grade or more than girls. By high school, boys are more likely to drop out of school than girls. In 2005 almost 11% of males ages 16 to 24 were high school dropouts, compared to 8% of females (Snyder, Dillow, & Hoffman, 2007).

One of the most striking changes in the U.S. education system is the change in college completion rates of men and women, with women outpacing men for the first time. In 1960, 65% of all bachelor degrees were awarded to men. By 1982 women reached parity with men in college completion, and, since then, women's college completion has increased to the point where in 2005 women received 58% of all bachelor's degrees (Snyder et al., 2007). This trend is also occurring in the

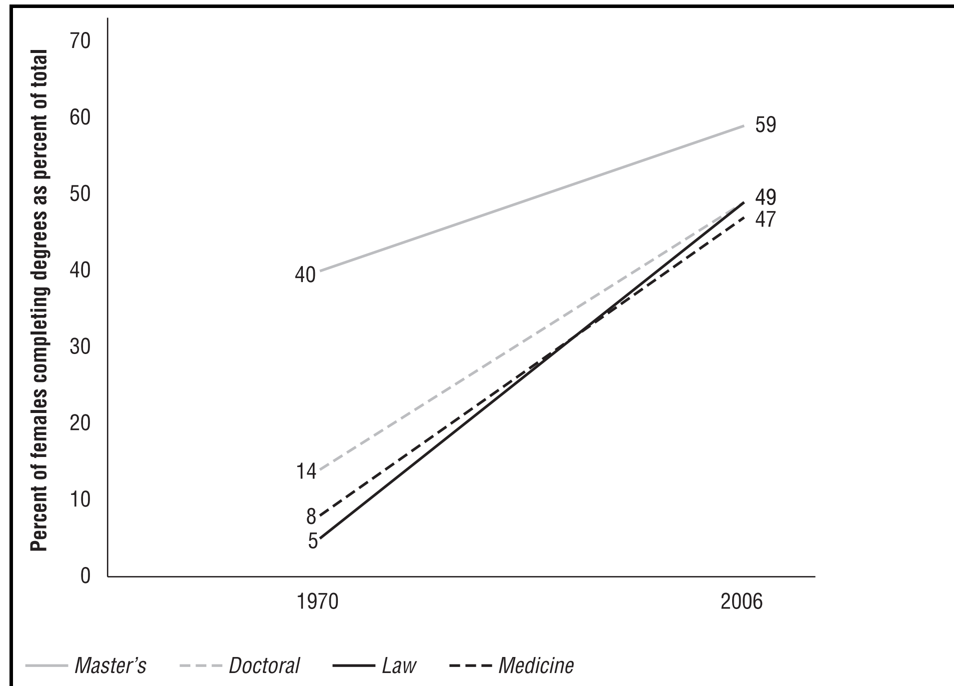


*Figure 1.* *Percentage of females completing graduate and professional degrees, 1970–2006.* CENGAGE LEARNING, GALE.

majority of industrialized countries with women on average representing 61% of students enrolled in university education (Organisation for Economic Co-operation and Development, 2007). In the United States, women's advantage in college-degree completion is more prominent in some racial groups than others. Women earn 66% of all bachelor's degrees earned by African Americans, 61% of degrees earned by Hispanics, 60% of degrees earned by Native Americans, 57% of degrees earned by Whites, and 55% of degrees earned by Asians (Snyder et al., 2007).

Although the female-favorable trend in college completion is striking, college fields of study remain highly sex-segregated. Although gender segregation in college declined substantially during the 1970s and 1980s, the decline stalled after this period (England & Li, 2006). Women earn only 20% of engineering, 28% of computer science, and 41% of physical science degrees. Women dominate the education and health professions fields, completing 77% of education degrees and 84% of health professions degrees (Freeman, 2004). Business, mathematics, social sciences, and history are less sex-segregated, with relatively equal numbers of men and women majoring in these subjects. The types of degrees earned by men and women differ, as do the types of colleges and universities they attend. Even though women are more likely to be enrolled in and complete college, the colleges they enroll in are less likely to be prestigious, selective schools. This group largely includes prominent engineering schools. Women are more likely than men to enroll in two-year institutions, such as community colleges.

Regardless of the remaining sex segregation in college majors, which has important implications for women's and men's outcomes after school, women have made considerable progress in the attainment of graduate and professional degrees. Figure 1 shows the change in the percentage of women completing graduate and professional degrees from 1970 to 2006 (Snynder et al., 2007).

## CAUSES AND EXPLANATIONS FOR GENDER DIFFERENCES IN EDUCATION

Gender differences in education have changed dramatically the since the 1960s. Traditionally, research focused only on how education advantaged men, but with the recent advancements of women in higher education, an increasing body of research has demonstrated a female advantage in many realms of education, especially in degree completion, grades, and classroom behaviors. Two main theoretical perspectives attempt to explain gender differences in education: biological perspectives and sociological perspectives. It should be noted, however, that these two perspectives are not always mutually exclusive.

**Biological Perspectives** Psychological and biological studies focus on differences in male and female brains, which cause males and females to excel at different subjects in school. Differences in the structure and organization of the brain lead to differing cognitive skills, which in turn, researchers argue, are the basis for gender differences in school performance and the predisposition to certain subjects. Females have advantages in verbal fluency, spelling, speech production, mathematical computation, and fine motor skills, which lead to advantages in standardized tests of reading and writing. Males have advantages in verbal analogies, mechanical reasoning, math word problems, memory for geometric configuration, spatial ability, and gross motor skills, which lead to advantages on standardized tests of math and science ability (Kimura, 1999). Despite these differences, research on cognitive sex differences tends to conclude that males and females are more similar than different and that cognitive abilities for the most part overlap. Although males and females have slightly different cognitive profiles, it is also agreed that males and females have equal cognitive abilities.

**Sociological Perspectives.** Sociological research on gender differences in schooling tends to ignore biological differences between the sexes, focusing instead on social factors that determine gender differences in the educational process. Gender role socialization, or the idea that social institutions socialize boys and girls according to traditional gender roles, influences children's and adults' expectations about their abilities, preferences, and opportunities. Parents' and teachers' perceptions of appropriate gender roles and skills may influence young boys' and girls' expectations and interests early in the life course. Some research finds that parents are equally involved in sons' and daughters' schooling, but other research suggests that parents may be more involved in sons' school activities and daughters' home activities and that parents have lower reading expectations of boys. Gender norms and socialization within the home can also affect boys' and girls' expectations about the future through parental role modeling. Girls tend to look to their mothers whereas boys look to their fathers when developing expectations about their future educational and occupational opportunities, which could reproduce traditional gender inequalities.

Teachers and schools also shape gender socialization and may treat males and females differently. Previously, girls were seen as disadvantaged in schools, with teachers calling on and praising boys more often in the classroom than girls (AAUW, 1992); some more recent arguments suggest, however, that boys are disadvantaged in schools. Teachers expect girls to be more studious and excel in the classroom, especially in reading and writing, whereas teachers expect more of boys in math and science. Teachers also rate girls as better students than boys, noting that girls are more cooperative and better communicators than boys (Downey & Vogt Yuan, 2005). It could be that girls are better students than boys, but it is also possible that schools are designed to reward behaviors that girls display naturally or that girls have been socialized to display, which could affect both teachers' and students' expectations (Mickelson, 1989).

Gender socialization also influences boys' and girls' school performance, and gender stereotypes may be of particular importance. Stereotype threat theory suggests that males and females are afraid of conforming to the traditional stereotypes of their gender, which negatively affects their performance in school and on standardized tests. Stereotype threat has been found to affect women when taking math tests, as there are widespread ideas that men outperform women on standardized tests, which causes additional stress and anxiety for women during test taking (Steele, 1997). This theory, however, has not been tested in the classroom, where women outperform men, but it is plausible that women are known to be better, more conscientious students, which may cause either anxiety or lowered expectations for men in the classroom.

## IMPLICATIONS FOR GENDER DIFFERENCES IN EDUCATION

Gender differences in school experiences and educational outcomes have important long-term implications for economic and family outcomes for men and women. Women's increasing share of higher education has affected the labor market and men's and women's experiences in the labor market. In 2006 DiPrete and Buchmann found that over the previous 39 years, overall returns to higher education (or the amount by which income increased per year of schooling received) increased for both men and women but increased more rapidly for women. Between the 1970s and 1990s the gender wage gap, or the ratio of women's average earnings to men's average earnings, declined. Women in all segments of the earnings distribution saw increases in their wages, whereas women with high levels of human capital (in terms of education and labor force experience) saw the greatest increase in their wages.

Occupational sex segregation also fell between 1970 and 1990, although the rate of decline slowed in the second decade. This meant that more women entered prestigious and often better-paying positions in occupational sectors such as law, business, and the sciences. Nevertheless, women have not surpassed men in the labor market, as a gender wage gap still exists, and it

seems that women's experiences in the labor market remain dampened to some degree. Given the continued gender segregation of college majors (Charles & Bradley, 2002), an important link exists between major choice and earnings, as women tend to choose majors that have lower earnings potential than men. Even for college-educated men and women with similar education credentials, standardized test scores, and majors, the gender gap in wages is reduced but remains significant

Gender differences in the educational process and educational attainment also have important long-term implications for an individual's family life. A negative relationship exists between a woman's education and divorce; the risk of divorce drops 6% for each additional year of schooling a woman receives. This is due, in part, to the fact that more educated individuals marry at later ages, but it is also due to marital homogamy (the marriage of like individuals) college-educated women are more likely to marry college-educated men, who have substantially lower rates of divorce than high school educated men. Moreover, after the mid-1970s, divorce rates fell among college-educated women whereas they continued to rise for less educated women. Higher educational attainment also is linked to fertility rates; college-educated women tend to have fewer children than women with only a high school education or less. Furthermore, women with less education are much more likely to have children outside of marriage than college-educated women. Education is the key determinant of fertility preferences, as rising levels of educational attainment substantially decreases fertility overall, which leads to societal changes in population size, density, and women's health.

## THE FUTURE OF GENDER DIFFERENCES IN EDUCATION

Gender differences in education clearly have an impact on the future experiences and opportunities of students, and researchers need to continue to elucidate the different paths males and females experience in schools. Future research on this subject is likely to focus on the growing female-favorable gap in high school and college completion to determine the causes of the reversal of males' advantages in the classroom. Much research also needs to be conducted exploring the possible psychological and biological determinants of gender differences in cognitive ability and behaviors. One avenue that researchers may follow is to study very young children, at the beginning of or before elementary school. Studying the extent of and causes of gender differences in academic ability and experiences early in the life course may help tease out social, biological, and school factors that affect gender differences.

Finally, the vast majority of research on gender differences in education uses large-scale, nationally representative survey data to gather results, such as the National Education Longitudinal Survey, which is produced by the U.S. Department of Education and follows students from eighth grade through early adulthood, or the Early Childhood Longitudinal Study–Kindergarten Cohort, which follows students from entry to kindergarten through fifth grade. Very little research on gender differences in education explores these differences outside of the United States or uses qualitative data to answer questions.

Examining gender differences across educational systems and cultures may lead to new and interesting conclusions about the nature of gender differences in educational performance and may help researchers determine the differing effects that culture and educational systems have on gender differentials in schools. Also, qualitative data, using in-depth interviews and ethnographic research, could help answer questions about the daily experiences of boys and girls in school. For example, Lopez's (2003) study of low-income, second-generation Dominican, West Indian, and Haitian adolescents found that different socialization and gendered norms within families cause boys and girls from the same family to have very different educational outcomes. Also, Thorne's (1993) study of gender roles in public elementary schools provided insights into how boys and girls segregate themselves and adhere to traditional gender roles early in schooling. These studies are informative, albeit not common.

## GENDER, EDUCATION, AND THE LIFE COURSE

As early as kindergarten, girls and boys have different experiences and outcomes in school, some of which advantage girls and others that advantage boys. These early experiences seem to set the stage for continued gender differences in the educational process, which in turn lead to differences in life outcomes such as marriage, family formation, and work. Consensus has yet to be reached on what causes gender differences in schooling, but it could be argued that both biological and social influences impact gender and education. One thing that is clear is that this topic will continue to capture the attention of researchers, policy makers, and the public.

**SEE ALSO** Volume 1: *College Enrollment; High School Dropout; Racial Inequality in Education; Socialization, Gender; Socioeconomic Inequality in Education;* Volume 2: *Gender in the Workplace.*

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***Anne E. McDaniel***

# GENETIC INFLUENCES, EARLY LIFE

The nature-versus-nurture debate is an important conceptual framework because it simplifies the very complex reality of genetic and environmental influences on development. The cost of this simplification is that individual differences are described as a function of *either* environmental *or* genetic characteristics rather than the simultaneous influence of genetic *and* environmental factors. This entry describes the ways in which researchers examine genetic influences among children and adolescents and then makes a case for simultaneously considering genetic and environmental causes. Although several relevant outcomes are linked to genetic factors such as personality, mental and physical health, and health-related behaviors, this entry focuses on cognitive functioning because of the reliability of the measure, the consistency of the findings, and the importance of the topic for social and behavioral researchers. In doing so, this entry reviews two important concepts that characterize the interplay between genes and environments. These concepts describe a situation in which a person's genes causes their environment (gene-environment correlation) or environmental settings that change the influence of someone's genes (gene-environment interaction). Following a discussion of these concepts, this section concludes with some general comments about this field.

## STUDYING GENETIC INFLUENCES AMONG CHILDREN AND ADOLESCENTS

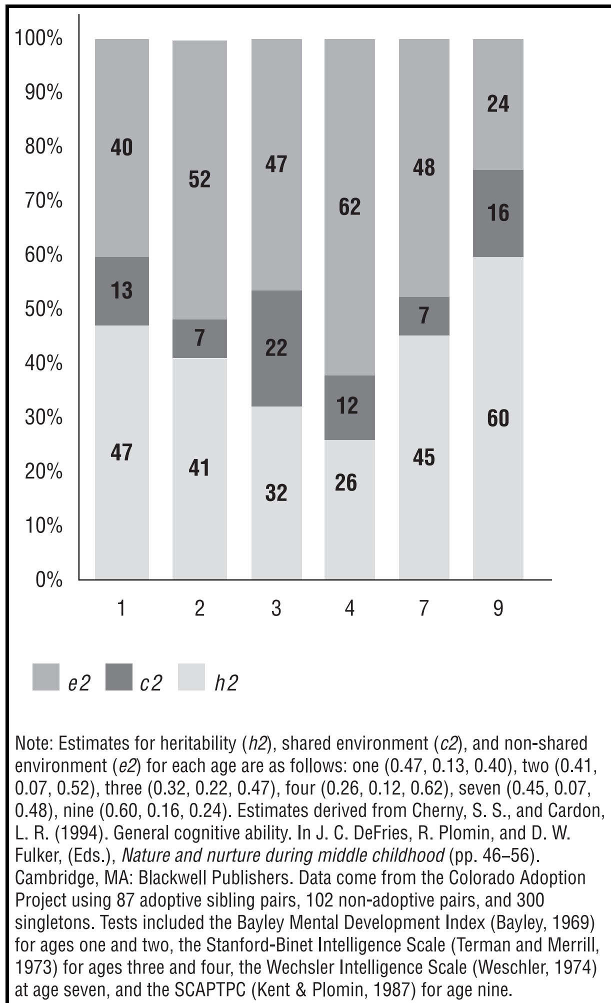
The scientific world of human genetics is rapidly changing, and hundreds of methods are currently available to researchers that describe the ways in which individuals are influenced by their genes. The complexity of this research, however, can be summarized by considering two broadly defined bodies of work: studies of twins and siblings in which genetic material is not available and studies in which study participants provide a physical specimen (e.g., saliva, blood, or tissue scraped from the inside of the cheek) that can be used to identify an individual's genes. The purpose of this entry is to introduce these two methods and summarize some of the

major findings with respect to the influence of genetic factors among infants, children, and young adolescents.

**Quantitative Genetic Studies** Behavioral genetics is an interdisciplinary field composed of behavioral, social, and biologic scientists who are interested in describing the extent to which differences in individuals are explained by differences in their genes, differences in their environments, or some combination. The bulk of the research in this area is based on the straightforward observation that two siblings are more likely than two unrelated people to resemble one another in terms of their physical appearance, behavior, personality, and well-being, because full siblings are often raised in very similar settings (i.e., a similar environment) but they also inherit half their genes from the mother and half from the father; thus, they share about half the same genes. This same logic is extended to the comparison of twin pairs in which identical twins share all their genes and fraternal twins, similar to the manner in which full siblings only share (on average) half their genes. If one assumes that same-sex fraternal twins and identical twins are raised in relatively similar environments, then the excess similarity of identical twin pairs compared with fraternal twin pairs is believed to be due to the excess genetic similarity among these pairs.

Based on the results of these studies in siblings, the most consistent evidence for pronounced genetic influences is in the area of cognitive development even among very young infants. In one of the earliest studies (1972) to make this point, Ronald S. Wilson compared the statistical association between the test scores of two twins for the Bayley Mental Development Score among twin pairs from the ages of 3 months to 2 years. He demonstrated a greater similarity among identical twins ($r$ = .84) compared with fraternal twins ($r$ = .67) even as young as 3 months. Sandra Scarr (1993) made a similar point when she compared the similarity of IQ scores among identical twins ($r$ = .86) and showed that this association is nearly the exact same as for the same person tested twice ($r$ = .87)! Even more striking is that identical twins who are raised in different families ($r$ = .76) still report a stronger correlation than fraternal twins who are raised in the same families ($r$ = .55).

Cognitive functioning also emerges as one of the most heritable characteristics among children and early adolescents. Using data from the Colorado Adoption Project, Stacey Cherny and Lon Cardon (1994) demonstrated that genetics may account for 39% of reading skills among 7-year-old children and 36% among 12-year-old children. In one study David Reiss and colleagues (Reiss, Neiderheiser, Hetherington, & Plumin, 2000) assessed more than 700 twin and sibling pairs




Note: Estimates for heritability (*h2*), shared environment (*c2*), and non-shared environment (*e2*) for each age are as follows: one (0.47, 0.13, 0.40), two (0.41, 0.07, 0.52), three (0.32, 0.22, 0.47), four (0.26, 0.12, 0.62), seven (0.45, 0.07, 0.48), nine (0.60, 0.16, 0.24). Estimates derived from Cherny, S. S., and Cardon, L. R. (1994). General cognitive ability. In J. C. DeFries, R. Plomin, and D. W. Fulker, (Eds.), *Nature and nurture during middle childhood* (pp. 46–56). Cambridge, MA: Blackwell Publishers. Data come from the Colorado Adoption Project using 87 adoptive sibling pairs, 102 non-adoptive pairs, and 300 singletons. Tests included the Bayley Mental Development Index (Bayley, 1969) for ages one and two, the Stanford-Binet Intelligence Scale (Terman and Merrill, 1973) for ages three and four, the Wechsler Intelligence Scale (Weschler, 1974) at age seven, and the SCAPTPC (Kent & Plomin, 1987) for age nine.

***Figure 1.*** *Genetic influences among very young children: heritability estimates for 14 and 24 month old children for 10 behavioral and physical outcomes.* CENGAGE LEARNING, GALE.

from the ages of 10 to 18 years. They collected information on psychopathology and competence and then compared the similarity of these characteristic among pairs of identical twins, fraternal twins, full siblings, half-siblings, and unrelated siblings. They found that genetic factors increased in salience over time and suggested that genes may account for two thirds of individual differences in cognitive agency. Similar results were reported by François Nielsen (2006) using data from high school age adolescents for grade point average and a somewhat lower estimate for verbal IQ.

Quantitative geneticists often use these designs to calculate a value called the *heritability estimate*. These estimates describe the degree to which differences among people are due to genetic differences; they range from 0 (in which genes are not relevant) to 1 (in which genetic

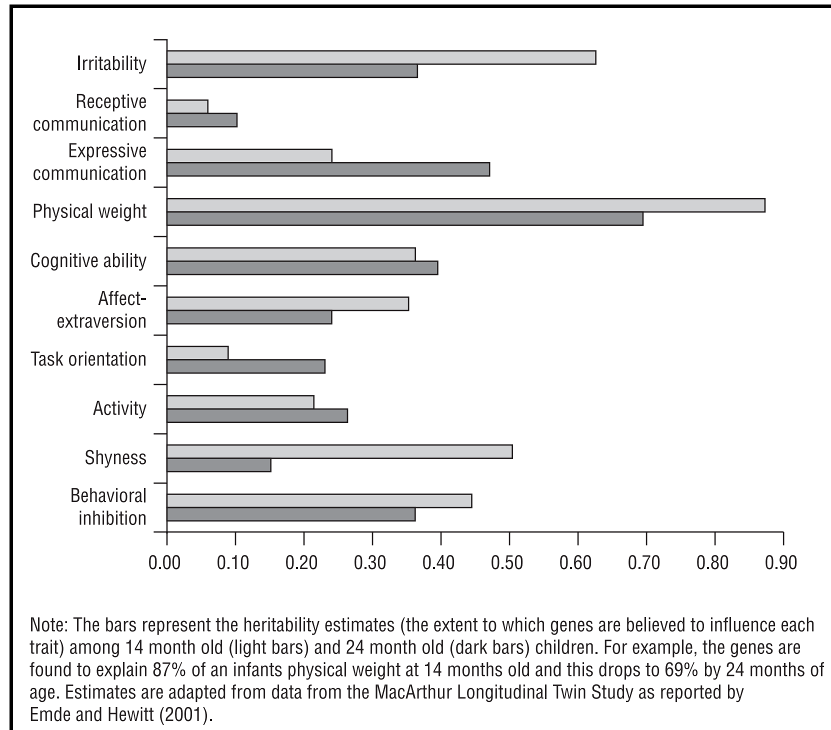



***Figure 2.*** *Nature, nurture, and general cognitive ability among children.* CENGAGE LEARNING, GALE.

factors are fully responsible for a trait). Figure 1 provides a summary of heritability estimates for a number of different outcomes among very young children from the MacArthur Longitudinal Twin Study.

**Studies with Measured Genetic Information** Since the early 1990s, the field of behavioral genetics has changed dramatically. The availability of molecular information describing an individual's genetic makeup is now readily (and affordably) available to researchers. Carefully designed studies can identify broad regions of the human genome (the entire set of all chromosomes), specific genes (smaller sections of the human chromosome that carry genetic information), and even very small pieces of the human genome called single nucleotide polymorphisms (SNPs) that may be associated with the trait of interest.

It is beyond the limits of this entry to detail the complexity of the molecular studies that are currently underway; however, there are two main study designs currently employed by researchers. When specific genes are believed to be causally linked to some outcome, then it is relatively easy to measure an individual's genetic composition at a specific location on his or her entire genome. After an individual's genes are measured at that location, it is simply a matter of comparing the genes of people who exhibit a particular behavior with those of a carefully constructed control group who do not exhibit the behavior. These studies are called *candidate gene* studies.

There are hundreds of candidate genes that have been linked to cognitive functioning and related outcomes, but efforts have primarily focused on the dopaminergic and serotonergic systems. Dopamine is one of a large number of neurotransmitters that is involved in the nervous system; this system is believed to mediate the reward pathway in the brain. Serotonin is also a neurotransmitter that is involved in brain development. The serotonergic system is linked to behavioral disinhibition, which has important implications for aggressiveness and impulsivity. Results from these studies focus on genes that influence the function of the receptors and the transporters for these two systems. Thus, although there are two main systems, multiple domains exist within each system that may operate independently from one another at times, but mostly they act in concert with one another. These systems are believed to influence cognitive development through more proximate behaviors such as temperament and hyperactivity.

The second type of molecular analysis involves studies that use information from the entire human genome to identify genetic risk (or protective) factors. Two

distinct types of studies are conducted in which large amounts of genetic information are used: linkage analysis and genome wide association studies. *Linkage analysis* is used to identify the location of broad chromosomal regions that may contain genes (called quantitative trait loci or QTLs) that are in some way responsible for the emergence or stability of some trait. Danielle Posthuma and Eco J.C. de Geus (2006) reviewed findings from five whole-genome linkage scans designed to identify chromosomal locations that are associated with cognition. These studies found that areas on chromosomes 2 and 6 consistently predict both cognition and academic achievement, but results by Plomin et al. (2005) were far less conclusive among children.

Although linkage analyses are designed to identify the general location on the chromosome, *genome-wide association* studies are designed to identify specific alleles that may influence complex behaviors. The human chromosome is composed of nearly 8 billion bits of information, and people differ from one another when a protein at a specific location is different in the two people; each of these minute proteins is an SNP. The goal of genome wide association studies is to identify SNPs that are causally linked to the increased risk of a disease or disorder. To date, a very limited number of studies have identified SNPs that significantly influence cognitive functioning, and the effects are very small, accounting for less than 1% of the variance (Butcher, Davis, Craig, & Plomin, in press).

## SOCIAL INFLUENCES ON GENETIC EFFECTS

The preceding discussion described ways to conceptualize genetic influences on children's development, and thus far the results have been structured around the nature-versus-nurture dichotomy. As described previously, this conceptual model serves an important purpose but is problematic because it does not consider several ways in which genes and environments interact. Genes do not exist outside of environments; environmental determinants have to *go through* people to affect some outcome. Therefore, to consider the effects to be independent or to be additive is to misinterpret the relative and combined influence of both sets of effects. Indeed, it is only the most basic behavioral genetics model in which characteristics are decomposed into only genetic and environmental components. Two important cautions exist with respect to gene-environment interplay that have important implications for social scientists. The first is called *social mediation;* it describes a situation in which specific genetic factors are regularly associated with a particular type of environment. The second is called *social moderation*, which is a situation in which specific genetic factors react differently in different environments. Also called *gene-environment correlation* and *gene-environment interaction*, respectively, these social influences bear heavily on the theoretical mechanisms that are behind genetic influences in early life.

**Social Mediation** Robert Plomin, John DeFries, and John Loehlin (1977) developed a typology of *social mediation* (also called *gene-environment correlation*) that has withstood the test of time largely intact. The first form of social mediation is called *evocative correlation*, which describes a situation in which people with given genetic characteristics tend to evoke similar reactions from other people. These reactions, in turn, shape that person's social context (or his or her environment). The most widely cited example of evocative correlations comes from work in which children who are genetically predisposed to have relatively irritable dispositions may be more likely than more peaceful children to *evoke* hostility and impatience from their parents, siblings, peers, or teachers.

The second form is called *passive correlation*, and it emphasizes the fact that children inherit genetic and environmental factors their parents. As described earlier in this entry, cognitive ability may be a highly heritable trait, and children raised by relatively intelligent parents may be more likely to be raised and socialized in an intellectually stimulating environment. Thus, the children passively inherit *both* the genetic characteristics related to cognitive development and the genetically influenced enriching environment. Finally, *active correlation* describes a situation in which someone's genes influence the type of social environment in which he or she chooses to interact. For example, children with genetically oriented cognitive skills may be attracted to more complicated games that both require and build problem-solving skills, which in turn influences positive cognitive development.

One of the central tenets of the sociologic perspective on the life course is the role of human agency; people actively construct their lives by means of those behaviors that they exhibit at different stages. Therefore, children are highly subject to the passive processes in their family, but over time they acquire more latitude in choosing and shaping their environments. Because passive and evocative gene-environment correlation (rGE) denote less agency and because the extent to which everyone's behaviors are limited by the relevant institutions in which they reside, people at either extreme of the life course are less likely to select into social groups as a function of their genes. In contrast, adults choose their settings—that is, with whom to associate, organizational memberships, and extent and quality of involvement—and, after those choices are made, they tend to evoke reactions within those chosen contexts.

## NATURE VS. NURTURE DEBATE

The nature versus nurture debate reduces the cause of individual differences to *either* genetic (nature) *or* environmental (nurture) differences. Some scientists can answer this question by breeding animals with known characteristics across controlled environments to obtain a very precise measure of genetic and environmental influence. The task of determining the influence of genes is more difficult among humans because it is not possible (or moral) to experiment with environmental factors such as school quality, neighborhood safety, family stability, or health. Similarly, one cannot manipulate an individual's genes and then measure changes in his or her behavior. Therefore, a common way to describe genetic and environmental influences is to study twins, siblings, cousins, and adopted siblings. Because identical twins share all of their genes and fraternal twins share (on average) one-half of their genes, excess similarity of identical twins is believed to be due to their genetic similarity. These studies estimate a value called "heritability," which ranges from a score of zero (where genes have no influence) to one (where genes are completely responsible). This heritability measure is a rough indicator of the "nature" effects, and the remaining amount is due to "nurture." According to these estimates, genetic factors account for 47% of the variation in cognitive ability at age 1 year.

Because the nature versus nurture debate focuses on either nature or nurture, it overlooks the more realistic observation that both nature and nurture matter; for example, sometimes nature causes people to be nurtured differently and sometimes the effects of nature depend on the nurture that one receives. Therefore, it is important to recognize that the interplay between genes and environments is far more complicated than the nature versus nurture paradigm.

One important example is the formation and maintenance of intimate relationships that involve assortative mating driven by active rGE, which strengthens over time. Most (if not all) behaviors known to drive assortative mating are also highly heritable, including, for example, mental health problems, various addictive behaviors, criminality and other forms of antisocial behavior, and education and intelligence. Thus, a spouse may contribute to the creation of an environment (particularly a household) that reflects his or her genetic factors and is shared by his or her partner. Such a pattern would be a variant of the classic passive correlation, which involves living in an environment created by a person from whom one is transmitted genetic material.

**Social Moderation** The gene-environment interaction perspective poses two related models: situations in which genetic effects depend on the environment and situations in which established environmental effects vary in their influence as a function of individual's genes. These models can be thought of as social moderation and genetic moderation, respectively. This section deals with the first orientation. The most relevant orientation for sociologists is that the environment serves as a trigger for the expression of a particular gene; a gene related to a particular outcome may only manifest as a cause in the presence of a triggering agent (*strong triggering*) or is expressed markedly more so in the presence of the agent (*weak triggering*).

In an example of weak triggering, Guang Guo and Elizabeth Stearns (2002) showed the realization of genetically oriented verbal IQ is higher among children from families with greater access to social and economic resources. Specifically, they calculated a higher heritability of verbal IQ among adolescents for whom both parents were employed compared to those with at least one unemployed parent. They showed a similar association by race in which heritability estimates are higher among White children compared to Black children. Their argument is that family stability, educational resources in the home, school-level differences, and parental educational status denote critical resources to enable genetic factors to do their work. This perspective is central to a sociologic interpretation of gene by environment interaction effects because, as Bruce Link and Jo Phelan (1995) argued, the environment should be characterized as a "fundamental cause." That is, although genetic factors are critical to the etiology of antisocial behavior, these genetic factors depend on the social environment to initiate the cascade of events called *genetic expression*.

Rather than enabling genetic tendencies, the *social control* model refers to norms and structural constraints placed on people that limit their behavior; control stems

from social structures or processes that maintain the social order (whether for the moral good or not).These controls might stem from strict legal enforcement, clear behavioral limitations associated with religion, highly organized and controlled educational settings, or broad macrolevel systems of stratification that limit particular individuals' mobility. Clear evidence for the broad social control model was presented in a study by Heath et al. (1985) that reviewed educational attainment among three birth cohorts in Norway. According to their estimates, the heritability of educational attainment was roughly 40% for men and women born before 1940. For men, changes in the traditional educational hierarchy provided greater access to the education system: The heritability increased to roughly 70%. For women, however, the heritability remained at 40%, reflecting the continuation of social norms and opportunities that controlled the educational opportunities and behaviors of women. The results of the study argued that the degree to which educational attainment was heritable was controlled among women but not men.

**Genetic Moderation** Genetic factors unique to individuals cause them to react differently to the same environmental stimuli. This gene-environment interaction perspective is shared by several genetic epidemiologists and is summarized in the following comment by Moffitt, Caspi, and Rutter (2006):

> Thus, findings of [gene-environment interaction studies] reframe the scientific question for environmental researchers. The question is not "Is there any environmental risk?" or "How big is the average effect of an environmental pathogen across all people exposed to it?" but rather "Who is at the greatest risk from an environmental pathogen?"

In two of the most widely cited examples of this perspective, Caspi and colleagues (2003) showed that well-established environmental risk factors operate differently as a function of individual's genes. In one example (Caspi et al., 2003), an adult's risk of major depression increases with the number of stressful life events that he or she may have experienced. However, among those people with two long alleles of a gene responsible for serotonin transmission (5-HTT), no clear association exists between chronic exposure to stressful life events and poor mental health. That is, people who are homozygous for this allele are particularly resilient to stressors that may otherwise lead to a major depressive episode. In a related study (Caspi et al., 2002), the researchers showed that childhood maltreatment does not appear to predict later forms of antisocial behavior among adults who have a genotype that is linked to the level of monoamine oxidases (MAO).

## CONCLUSION

Because social scientists are primarily interested in describing broad group-level relationships and interdependencies, very little emphasis has been placed on the role of genes. Emphasis is almost exclusively place on micro-, meso-, and macro-level environmental factors, and the debates revolve around the ways in which ascriptive characteristics place people within risky or supportive environments. Recently, however, interest has been renewed among sociologists in exploring the possibility that biologic characteristics are related to complex behaviors such as smoking, sexual behavior, and academic success (Guo an Tong, 2006; Nielsen, 2006). Because of the significance of the social environment in understanding the ways in which genes operate (e.g., moderation, mediation, identification), the long sociologic tradition of measuring and monitoring social environmental factors denotes an important contribution to behavioral genetic inquiry. Although heritability estimates have historically represented fixed parameters, sociologists are pushing for the understanding that they represent average values with a great deal of variation. Genes are important for understanding individual differences, but these influences can only be understood when they are situated in a particular context.

**SEE ALSO** Volume 1: *Academic Achievement; Cognitive Ability; Health Behaviors, Childhood and Adolescence; Health Differentials/Disparities, Childhood and Adolescence;* Volume 2: *Genetic Influences, Adulthood;* Volume 3: *Genetic Influences, Later Life.*

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# GIFTED AND TALENTED PROGRAMS

SEE Volume 1: *Cognative Ability; School Tracking.*

# GRAMMAR SCHOOL

SEE Volume 1: *Stages of Schooling.*

# GRANDCHILDREN

This entry reviews the scholarly research about grandchildren and grandparent-grandchild relations within the context of multigenerational families. Because being a grandchild is the joint product of two family transitions, the nature of this family role cannot be separated from the roles that grandparents and parents perform, as well as the relationship between them. Where *grandparenting* and *parenting* are action verbs for how grandparents and parents enact their respective roles, being a grandchild has no comparable term. Thus, the roles played by grandchildren are more passively constructed and necessarily dependent on experiences within the wider family system.

## GRANDPARENT ROLES IN RELATION TO GRANDCHILDREN

The study of grandparenting as an independent branch of inquiry emerged in the 1940s and 1950s as highlighted by several historical events—World War II (1939–1945) and the postwar baby boom. On the one hand, observers noted that grandparents helped their children's families adapt to the dislocations and hardships caused by war, and subsequently provided child care assistance to the growing number of households with young children. On the other hand, some argued that grandparents had become less relevant during the postwar economic expansion as a result of their children's geographic mobility and increasing reliance on professional sources for childrearing advice and help (Szinovacz, 1998).

Inspired by pioneering research on grandparenting styles by Bernice Neugarten and Karol Weinstein (1964), social scientific investigations into grandparenting surged in the 1980s when several important volumes were published on the topic by Vern Bengtson and Joan Robertson (1985) and Andrew Cherlin and Frank Furstenberg (1986)—*Grandparenthood* and *The New American Grandparent*, respectively. These works were instrumental in directing the attention of scholars to what had still been a somewhat marginal area in family research. Much of the literature of that period focused on characterizing grandparent roles themselves, using such descriptive labels as *fun-loving*, *companionate*, *formal*, and *remote* to describe how grandparents stylized their relationships with grandchildren and their families. Issues of race, class, gender, and timing (whether the role occurred at the *typical* stage in the life course, versus significantly earlier or later) were examined in relation to grandparenting styles.

In Cherlin and Furstenberg's national study of grandparents, no particular style emerged as a majority, underscoring the diverse and normatively ambiguous

nature of grandparenting. Much discussion centered on how grandparents could resolve the tension between their wish to be fully involved in the lives of grandchildren and their need to adhere to the implicit "norm of noninterference" often expected of them. Research during this period also focused on the instrumental role of grandparents as guardians of family culture and continuity, lauding their contributions as the watchdogs of the family.

More contemporary evidence continues to show that grandparents are actively involved with their grandchildren, serving as mentors, confidants, and companions to them. The typical grandchild-grandparent relationship is one based on respect, unconditional love, mutual support, and friendship. A good deal of scholarly attention has been devoted to describing variation in the involvement of grandparents with their grandchildren based on structural, biological, and demographic characteristics of all three generations. Grandchildren tend to feel emotionally closer to their maternal than their paternal grandparents, feel closer to their grandmothers than their grandfathers, and are more intimate with grandparents who have better relationships with the lineal parent and in-law (Fingerman, 2004). Among all grandparents, maternal grandmothers are the most active contributors to their grandfamilies and maintain the closest relationships with grandchildren (Chan & Elder, 2000). Grandchildren also have more distant relationships with grandparents with fewer resources, specifically those who are older, less healthy, and widowed (Silverstein & Marenco, 2001).

Parental divorce has weakened some grandparent-grandchild relationships but has strengthened others (Kennedy & Kennedy, 1993). Because of custody decisions that favor mothers and higher rates of stepfamily formation among fathers, family disruption tends to strengthen ties to grandparents on the maternal side and weaken them on the paternal side (Uhlenberg & Hammill, 1998). Further, growth in the prevalence of step-grandparents has created new ambiguities in a relationship that already has uncertain guidelines.

## INSTRUMENTAL FAMILY ROLES OF GRANDPARENTS AND GRANDCHILDREN

Scholarship on grandparents and their grandchildren achieved a sort of renaissance in the 1980s and 1990s when the number of grandparents raising grandchildren began to surge. The percentage of children living in grandparent-headed households almost doubled in the last 30 years of the 20th century, rising from 3% of children in 1970 to 5.5% in 1997 (Bryson & Casper, 1999). As of 2000, more than 2.4 million grandparents claimed primary responsibility for at least one coresident grandchild (Simmons & Lawler Dye, 2003). The number of grandchildren being raised by grandparents increased in all socioeconomic and ethnic groups, but rose most dramatically among African-American families in which the parental generation was incapacitated as a result of crack cocaine addiction, HIV or AIDS, and incarceration.

Research suggests that children being cared for full time by their grandparent(s) are at elevated risk for behavioral and emotional problems (Billing, Ehrle, & Kortenkamp, 2002), often assumed to be the consequence of the dire home environments that created the need for the grandparents' care in the first place. However, compared to day care, after-school programs, babysitters, nannies, and other formal sources of help, grandparents tend to have a less casual interest in the well-being of their grandchildren. One study, for instance, found that the health and school adjustment of children raised solely by grandparents was nearly equivalent to children raised by one biological parent (Solomon & Marx, 1995).

Families in which grandparents are raising grandchildren provide a dramatic, but only one, example of how the fortunes of three generations are mutually interdependent. Women's labor force participation provides grandparents additional opportunities to take care of grandchildren raised in dual earner and single-mother households. Mary Elizabeth Hughes and colleagues (2007) found that caring for grandchildren is quite common in the United States, with 40% of grandparents providing at least 50 hours of care per year for the children of working parents. In the United Kingdom one in five children less than 16 years old is looked after by their grandparents during the daytime (Clarke & Cairns, 2001), and a multinational European study found that 40–60% of grandparents reported taking care of grandchildren over a 1-year period (Attias-Donfut, Ogg, & Wolff, 2005).

How families benefit economically from grandparent-provided care has been the subject of several investigations. Emanuela Cardia and Serena Ng (2003) found that parents who received child-care services from grandparents improved their economic status by increasing their paid labor force participation and avoiding formal child-care costs. However, direct money transfers from grandparents had little economic effect on household resources because such assistance reduced the amount of time that parents worked in the paid labor force. Similar conclusions were reached in a study of immigrant grandparents in France, who tended to provide grandchild care to daughters with greater labor market potential than to those with greater economic need (Ralitza & Wolff, 2007). Together, these

results support the notion that grandparents *strategically* invest their child care labor to optimize the overall well-being of their grandfamilies.

A key, but largely unanswered question that arises for researchers is whether grandchildren who receive social, emotional, and material resources from their grandparents later reciprocate by, for example, being caregivers for their grandparents. Grandchildren who received more early care from grandparents do tend to have closer relations with them in adulthood, arguably a precondition to being a caregiver. However, there is only limited evidence that grandchildren are prolific providers of support to their grandparents. A novel perspective developed by Debra Friedman and colleagues (2008) argues that grandparents have an incentive to invest in those grandchildren whose *parents* are most likely to be a caregiver to them, bringing into consideration the possibility that reciprocity with grandchildren may be indirect.

Among the most altruistic grandparents are those who care for their disabled grandchildren. A review of literature suggests that these heavily invested grandparents are greatly valued by their families, but found little systematic research concerning their capacity for meeting the demands of this challenging role, and the effectiveness of their intervention with respect to the well-being of the children under their care (Mitchell, 2007). Research by Jennifer Park and colleagues (2005) reveals that although grandparents are prolific providers of care for developmentally disabled, impaired, and special-needs grandchildren, they sometimes face difficulties in bonding with these grandchildren, particularly those exhibiting communication and behavioral difficulties.

## PSYCHOSOCIAL INFLUENCE OF GRANDPARENTS ON GRANDCHILDREN

*Family systems theory* provides an overarching psychosocial paradigm that stresses the importance of looking beyond the parent-child relationship to more fully account for the familial forces that shape children's development and adaptation. Literature suggests that grandparents can be important contributors to the successful psychosocial development and well-being of their grandchildren in infancy and beyond. Suitable care and stimulation provided by grandmothers and grandfathers benefits the social, cognitive, and motor skills of infant grandchildren. The role of grandparents in mitigating adjustment difficulties of young grandchildren raised in nontraditional families has also been documented. However, in such circumstances, the involvement of grandmothers may also produce negative effects such as when it causes a reduction in maternal involvement (Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994) or when grandmotherhood occurs at such a young age that the role is not fully engaged (Burton, 1995).

There has been little systematic study of the continued importance of grandparents beyond childhood, in part because few studies of adolescents and young adults have inquired specifically about the role that grandparents play (or have played) in their lives. However, using national data, research by Sarah Ruiz and Merril Silverstein (2007) found that among children raised by single mothers or depressed mothers, those whose grandparents served as secure attachment figures tended to have better mental health in adulthood.

Grandparents play an important symbolic role with respect to their grandchildren by conveying core values and providing a cultural window into family history and traditions. Religion represents one of several intergenerational threads that bring grandparents and grandchildren closer together around a shared value system. Grandparents have been found to directly influence the religious orientation of their grandchildren without parental influences, suggesting a fundamental contribution to their worldview (Copen & Silverstein, 2007). Contact with grandparents also conditions grandchildren to think and act differently about their own and their family's aging. Those adults who had more exposure to their grandparents earlier in life tend to hold more positive attitudes about elderly people, express greater support for entitlement programs that benefit older adults, and are more likely to live with their aging parents.

## SOCIOCULTURAL AND ECOLOGICAL PERSPECTIVES ON GRANDPARENT-GRANDCHILD RELATIONS

The type and level of grandparent involvement has a basis in cultural norms and in the economic organization of families, localities, and nations that emphasize or downplay the role of grandparents. Ethnic differences in grandparenting have long been observed, particularly with respect to African-American grandparents who tend to be more involved with their grandchildren, and more apt than other grandparents to discipline and guide their grandchildren (Hunter, 1997). African-American grandmothers closely identify with their role as grandparents and derive a great sense of meaning and accomplishment from contributing to the development of their grandchildren. The stronger, more authoritative role taken on by Black grandmothers has long cultural roots, reflecting a tradition of surrogate parenting and extended familism going back to the time of slavery.

Grandparent-grandchild relations in Hispanic families are typically viewed as stronger and more durable

than those in non-Hispanic White families. However, Silverstein and Xuan Chen (1999), in a study of Mexican-American immigrant families, found that young adults who acculturated away from their native language and traditional customs tended to feel emotionally and socially detached from their more culturally traditional grandparents. The culture gap between grandchildren and their grandparents did not predict grandparents' assessments of their relationships with grandchildren. This pattern suggests that in immigrant families, grandchildren but not grandparents attribute the socioemotional distance between them to acculturation differences.

Local conditions also influence relations between grandparents and grandchildren. For instance, Valarie King and Glen Elder (1995), in their study of rural Iowa farm families, found that grandchildren tended to have stronger relations with their paternal grandparents than with their maternal grandparents, a reversal of the pattern found in urban families of Los Angeles (King et al., 2003) and the majority of other studies. The strength of paternal ties observed in rural Iowa is attributed to traditional patterns of inheritance in agricultural communities where land ownership is passed from father to son.

There are few cross-national studies of grandparenting and grandparent-grandchild relations. However, in a study of ten European nations, Karsten Hank (2007) found that older parents tended to live closer to children who had children of their own. That this relationship held in the more familistic nations of the Mediterranean as well as the *welfare-state* nations of Scandinavia provides evidence of the universal attraction of grandchildren. Further, it has become increasingly clear that the nature of grandparent-grandchild relations cannot be reduced to a simple dichotomy based on welfare-state characteristics. For instance, Gunhild Hagestad and Janneke Oppelaar (2004) report that grandparents in Norway care for their grandchildren at nearly twice the rate of grandparents in other European nations (including Spain). Paradoxically, grandparent-provided care was most common in the nation with the most generous public child care benefits, but also in the nation with the highest rate of women's labor force participation.

Evidence is strong that grandparents play a crucial role in maintaining the economic viability of families in the developing nations of Asia. It is not uncommon for grandparents in rural China to act as surrogate parents to their grandchildren when adult children migrate to find work in urban areas. In China and other Asian nations, child care labor provided by grandparents allows adult children to seek out more promising labor markets and send back remittances that benefit the grandparents and young children left behind (Agree, Biddlecom, Chang, & Perez, 2002).

## FUTURE DIRECTIONS

Discussed below are several areas for future research that will further existing knowledge about grandchildren and their relationships with grandparents.

**Life-stage Considerations** The timing of grandparents' contributions to their grandchildren has been little considered. In middle childhood, children are faced with the tasks of developing a sense of competence and developing their identities. Incomplete or inadequate resolution of these challenges can produce loneliness, anxiety, and unhappiness. Adolescents are faced with establishing autonomy and forming a consistent sense of self, and may be at odds with their parents. Young adults making key life decisions can benefit from the advice and support that grandparents may be best positioned to impart. Future research should address when and how grandparents are effective in helping their grandchildren cope with these different developmental challenges. The social implications of co-surviving grandparents and grandchildren have yet to be parsed, yet it is tempting to speculate that longer periods of joint survivorship between generations will increase opportunities for intergenerational support and exchange between them.

In addition, benefits provided by grandparents may persist long after their grandchildren leave childhood. There may be *sleeper* effects of early grandparent involvement that do not come to fruition until grandchildren begin managing adult roles, such as entering romantic relationships, beginning careers, and forming families of their own. Long-term longitudinal models will be required to trace the developmental outcomes of grandchildren as a function of their earlier intergenerational experiences to periods that postdate their grandparents' survival.

**Demographic Change and Kin Supply** Increased longevity has radically increased the amount of time that grandchildren will know their grandparents. Peter Uhlenberg (1996) notes that 80% of children born in the mid-1990s had at least one surviving grandparent compared to only 20% at the turn of the 20th century. The simple numerical truth is that because of longer life expectancies and declining fertility rates, there are, historically speaking, more grandparents per grandchild than ever before. Further, compositional changes in families because of divorce and remarriage have increased the number of step-grandparents in the population. Has this inversion in traditional family structures increased the competition for attending to grandchildren? If so, will grandchildren

benefit from the increased attention they receive from grandparents?

**Sociological, Biological, and Ecological Perspectives** Bio-evolutionary theories ask whether grandparents are genetically predisposed to promote the success of their grandchildren—a phenomenon known as the *grandmother effect*. The principle of paternity-certainty posits that maternal grandmothers will have the strongest genetic incentive to invest in grandchildren and paternal grandfathers the weakest. Research has consistently shown evidence supporting this hypothesis in Western nations. However, in nations that have paternalistic cultures, the opposite pattern is realized, with more investment in grandchildren by paternal grandparents. These contradictory observations call into question the essentialist view of grandparent-grandchild relations, and, more generally, call for comparative analyses of grandchild investment strategies that take into account the implications of cultural and economic context across different regions of the world.

SEE ALSO Volume 1: *Cultural Capital; Family and Household Structure, Childhood and Adolescence; Parent-Child Relationships, Childhood; Sibling Relationships, Childhood and Adolescence; Social Capital;* Volume 3: *Grandparenthood.*

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***Merril Silverstein***

# H

## HEAD START

**SEE** Volume 1: *Child Care and Early Education; Policy, Education.*

## HEALTH BEHAVIORS, CHILDHOOD AND ADOLESCENCE

*Adolescence* is a transitional phase of development that begins at the onset of puberty and continues into early adulthood (Nielsen, 1996), whereas *health behaviors* have been broadly defined as the voluntary activities an individual undertakes to promote or enhance health, to prevent or detect disease, and/or to protect from risk of disease, injury, or disability (Alonzo, 1993).

Health behaviors have often been discussed from a *health-enhancing* or *health-damaging* perspective (Spear & Kulbok, 2001). It is necessary to understand the main themes and theories (e.g., social learning theory) in research on youths' health-damaging behavior (e.g., smoking), the predictors of health-damaging behavior (e.g., substance-using peers), the illnesses (e.g., obesity, cancer), and the costs involved in order to design and implement effective prevention and intervention policies and programs and thus reduce health-damaging behaviors and the illnesses associated with them. Among others, primary health-damaging behaviors include smoking, sexual risk behavior, violence and aggression, poor diet, and lack of exercise (Spear & Kulbok, 2001). This review explores three of these behaviors: exercise, diet, and smoking. It also seeks to include factors influencing health-damaging behaviors, consequences of health-damaging behavior, and theories on youth health behaviors, as well as current trends in major health behaviors.

### HEALTH-DAMAGING BEHAVIORS

The majority of adolescent and early adult morbidity and mortality can be attributed to preventable risk factors such as smoking, poor nutritional habits, and lack of exercise (Irwin, Burg, & Cart, 2002). All of these behaviors are initiated during adolescence and young adulthood and often form behavior patterns lasting into adulthood (Irwin et al., 2002; Irwin, Igra, Eyre, & Millstein, 1997). The following offers detailed explanation on how health-damaging behaviors determine adolescent health status.

**Cigarette Smoking** Cigarette smoking is a major health-damaging behavior in the United States. Studies by Tomeo, Field, Berkey, Colditz, and Frazier (1999) suggested that three-quarters of American youth have tried at least a few puffs of a cigarette before attaining their 18th year. A more recent study by D. B. Wilson et al. (2005) found that 23% of high school students in the United States were currently smoking. Although the average age of smoking initiation was earlier reported to be 14.5 years, children younger than 12 have reported experimenting with cigarettes (Tomeo et al., 1999).

**Effects of Smoking** Early onset of smoking has been shown to be predictive of sustained adolescent and adulthood smoking, with lung cancer mortality being highest among adults who began smoking before age 15 (Tomeo

et al., 1999; D. B. Wilson et al., 2005). Interestingly, studies also have found smoking to be associated with greater consumption of fatty foods, lower consumption of fresh foods, less exercise, and reduced intake of important vitamins, minerals, and fiber (Margetts & Jackson, 1993). For example, milk consumption has been found to be declining nationally among adolescents, often being replaced by soft drinks (Jacobson, 1998). This pattern may be even more prevalent in teens who smoke.

Females who smoke appear more likely to exhibit compromised food intake in both middle and high school when compared to males. This may be due to concerns about body weight, which may be a motivator to begin smoking as well as restricting food intake. It has also been found that smoking coupled with low intake of calcium-rich food combines risk factors that are associated with poor bone health, particularly among girls. If poor dietary behavior and/or decreased physical activity among smokers persist beyond adolescence, it may significantly lead to obesity or overweight and other risks for chronic diseases beyond those solely attributable to smoking (D. B. Wilson et al., 2005).

**Diet and Exercise/Sedentary Behavior** Increased attention has been focused on exactly what children are eating. Many school districts now grapple with the problems of unhealthy lunch options and nutritionally deficient items in school vending machines (Suarez-Balcazar et al., 2007). Although national objectives of promoting healthy dietary behavior and physical activity suggests an increase in consumption of fruits and vegetables and participation in vigorous physical activity (U.S. Department of Health and Human Services, 2001), many American adolescents engage in only minimal physical activity, spending much of their time in sedentary pursuits such as viewing television and playing computer games (Lowry, Wechsler, Galuska, Fulton, & Kann, 2002; D. B. Wilson et al., 2005).

A study by D. B. Wilson et al. (2005) documented that a higher prevalence of health-damaging behavior is found among African American and Hispanic American adolescents. Numerous studies suggest that there is greater TV viewing and less participation in physical activity mostly among Black and Hispanic youth compared to White youth (U.S. Department of Health and Human Services, 2001). Black and Hispanic youth are also less likely to regularly eat breakfast.

**Exercise/Sedentary Behavior by Grade Level, Gender, and Ethnicity** Additional study by Jorge Delva, Patrick O'Malley, and Lloyd Johnston (2006) found consistent gender differences in exercise levels, with more males than females in each racial/ethnic group reporting that they get vigorous exercise. Along racial/ethnic lines, a greater percentage of White females than Black or Hispanic American females reported frequent, vigorous exercise at each of the three grade levels (eighth, tenth, and twelfth). No racial/ethnic differences were found, however, among males across all three grades.

Regarding TV viewing, Delva et al. (2006) again reported significant racial/ethnic differences in the number of hours youths watched TV on an average weekday. Black students consistently reported the highest number of TV viewing hours compared to Whites. For example, from 2001 to 2003 the number of hours that eighth-grade males viewed TV on an average weekday was 2.5, 3.7, and 3.2 hours for Whites, African Americas, and Hispanic Americans, respectively. Among females during this same period, the respective numbers were 2.3, 3.7, and 3.1 hours; there were, however, no appreciable gender differences in hours of television watched within each racial/ethnic group. At all grades and ethnicities, White youth spent less time watching TV overall than either African American or Hispanic American adolescents.

**Dietary Behavior by Grade Level, Gender, and Ethnicity** Delva et al. (2006) also found dramatic disparities in breakfast eating by grade level, gender, and ethnicity, with African American youths eating the least breakfast, followed by Hispanic Americans, then Whites. Among male students in eighth grade, 58% of the Whites ate breakfast frequently, compared to 42.6% of the African Americans and 43.7% of the Hispanics. The corresponding figures for eighth-grade females who ate breakfast were 40.3% for the Whites, 28.3% for the African Americans, and 31.2% for the Hispanics. Among males in twelfth grade, only 33.8% of the Whites ate breakfast frequently versus 20.3% of the African Americans and 29.8% of the Hispanics. Of twelfth-grade females, 30.4% of the Whites, 17.8% of the African Americans, and 22.3% of the Hispanics ate breakfast frequently.

## TRENDS IN CONSEQUENCES OF HEALTH-DAMAGING BEHAVIOR

Studies have suggested that health-damaging behaviors such as smoking, poor dietary behavior, and decreased activity/sedentary behaviors have adverse health consequences such as obesity, overweight, and other risks for chronic diseases (D. B. Wilson et al., 2005). In a study of children and adolescents ages 2 to 19 years, Cynthia Ogden and colleagues (2006) found that the prevalence of overweight in U.S. children and adolescents was on the rise. Reflecting the overall growth of obesity in the United States during the same period, this study found that since the mid-1960s, the proportion of children considered obese has increased from about 3.5% to approximately 16%. Whereas health-damaging behaviors

| Variable | Male Nonsmokers | Male Smokers | Female Nonsmokers | Female Smokers | Total Nonsmokers | Total Smokers |
|---|---|---|---|---|---|---|
| *Middle school (6th–9th grade)* | | | | | | |
| *n* (%) | 3711 (95.3) | 185 (4.7) | 3909 (94.7) | 217 (5.3) | 7620 (95) | 402 (5) |
| Eat fruit (%) | | | | | | |
| ≥1 serving per day | 45.5 | 48.6 | 48 | 44.2 | 46.8 | 46.3 |
| <7 times during past week | 54.5 | 51.4 | 52 | 55.8 | 53.2 | 53.7 |
| Eat vegetables (%) | | | | | | |
| ≥1 serving per day | 48.1 | 49.7 | 53.7 | 45.6 | 51 | 47.5 |
| <7 times during past week | 51.9 | 50.3 | 46.3 | 54.4** | 49 | 52.5 |
| Consume milk dairy (%) | | | | | | |
| ≥1 serving per day | 62.8 | 61.6 | 60.5 | 56.7 | 31.6 | 59 |
| <7 times during past week | 37.2 | 38.4 | 39.5 | 43.3 | 38.4 | 41 |
| Exercise frequency (%) | | | | | | |
| ≥3 times per week | 79.4 | 74.6 | 76.6 | 69.1 | 77.9 | 71.6 |
| <3 times per week | 20.6 | 25.4 | 23.4 | 30.9** | 22.1 | 28.4** |
| *High school (9th–12th grade)* | | | | | | |
| *n* (%) | 967 (78.7) | 262 (21.3) | 1100 (79.5) | 284 (20.5) | 2067 (79.1) | 546 (20.9) |
| Eat fruit (%) | | | | | | |
| ≥1 serving per day | 42.8 | 42 | 45.5 | 41.9 | 44.2 | 41.9 |
| <7 times during past week | 57.2 | 58 | 54.5 | 58.1 | 44.1 | 58.1 |
| Eat vegetables (%) | | | | | | |
| ≥1 serving per day | 51.2 | 46.9 | 56.5 | 47.2 | 54 | 47.1 |
| <7 times during past week | 48.8 | 53.1 | 43.5 | 52.8** | 46 | 52.9** |
| Consume milk dairy (%) | | | | | | |
| ≥1 serving per day | 66.4 | 56.5 | 63.6 | 54.6 | 64.9 | 55.5 |
| <7 times during past week | 33.6 | 43.5** | 36.4 | 45.4** | 35.1 | 44.5*** |
| Exercise frequency (%) | | | | | | |
| ≥3 times per week | 78.3 | 71 | 70.2 | 56 | 74 | 63.2 |
| <3 times per week | 21.7 | 29** | 29.8 | 44*** | 26 | 36.8*** |

** $P < 0.01$, all comparing smokers to nonsmokers.
*** $P < 0.01$, all comparing smokers to nonsmokers.

***Table 1.*** *Food intake and exercise level by smoking status and gender.* CENGAGE LEARNING, GALE.

(e.g., poor dietary behavior, inadequate exercise, sedentary behavior) result in adolescent obesity and being overweight, these consequences subsequently lead to both contemporaneous and long-term physical and mental health outcomes and higher health care costs (Thulitha Wickrama, Wickrama, & Bryant, 2006). Studies from the early 21st century have demonstrated that obese adolescents are at high risk for mental and physical health problems such as depression, lower-body disability, diabetes, hypertension, heart disease, increased blood lipid levels, and glucose intolerance (Thulitha Wickrama et al., 2006).

## GENDER AND ETHNIC DIFFERENCES IN CONSEQUENCES OF HEALTH-DAMAGING BEHAVIOR

Nationwide it is apparent that the United States is becoming a "wide nation," and the consequences of health-damaging behavior become even clearer when gender and race/ethnicity are taken into account. Research by K.A.S Wickrama, Glen Elder, and Todd Abraham (2007) found the prevalence rate of these health consequences (e.g., chronic diseases) among minorities (e.g., Latino adolescents) to be higher than that among Whites. In addition, minorities (e.g., African Americans or Hispanic Americans) rather than Whites, because of structural constraints both at the individual and the community level, are more likely to live in low socioeconomic status neighborhoods (D. B. Wilson et al., 2005). Thus, the prevalence and persistence of chronic illnesses associated with adolescent health-damaging behavior might be explained partially by the disparities in racial/ethnic minority backgrounds (Godoy-Matos et al., 2005). Such associations between adolescents' health outcomes and factors at the neighborhood level (e.g., neighborhood socioeconomic status) and individual level (e.g., being a racial/ethnic minority) have been explored elsewhere (e.g., Thulitha Wickrama et al., 2006; Wickrama & Bryant, 2003; Wilson,1987).

## FACTORS INFLUENCING HEALTH-DAMAGING BEHAVIOR

The paragraphs that follow use social learning processes, prototype models of health risk behavior, life-course perspectives on development, and social structural theory to explain when, why, and how adolescent health

outcomes are influenced, specifically by unhealthy dietary practices, smoking, and lack of exercise.

**Individual-Level Influences** The social learning perspective provides a useful framework for understanding how adolescents develop positive attitudes and expectations regarding specific health-damaging behaviors (Bandura, 1977). According to this perspective, substance-using peers model and reinforce health-damaging behaviors such as smoking among peer group members (Conger & Rueter, 1996).

Both older and newer studies (e.g., Gibbons & Gerrard, 1995; Gerrard, Gibbons, Stock, Lune, & Cleveland, 2005) propose a prototype model of health-damaging behavior. This model assumes that people maintain a prototype, or image, of the type of person who engages in a particular health-damaging behavior (e.g., poor diet, smoking), and that their attitudes and propensity toward the behavior reflect the favorability of this prototypic individual. The more favorable the image, the more willing the individual is to engage in the health-damaging behavior.

Intergenerational studies from a life-course perspective (Wickrama, Conger, Wallace, & Elder, 1999) showed the effects of parental health-damaging behavior on adolescent health-damaging behavior both in terms of overall lifestyle and specific behaviors. These researchers also suggested that this intergenerational transmission of health behaviors may have gender symmetry (i.e., fathers' health risk lifestyles affected only boys' health risk lifestyles, and mothers' health risk lifestyles affected only girls' health risk lifestyles). From a social learning perspective, it makes sense that behavioral similarities may be greatest between parents and children who spend time interacting with one another, as often occurs within same-gender pairs.

**Community-Level Influences** Social structural theory suggests that structural constraints among socially disadvantaged individuals (e.g., minorities) dominate their choices of health-related behaviors and accordingly result in an unhealthy lifestyle. That is, socially disadvantaged adolescents may have less autonomy to choose healthy behavior because of reduced access to health information and limited control over sleeping hours and food choices (Wickrama et al., 1999).

Community studies from the late 20th and early 21st centuries have attempted to place individual-level theoretical explanations within the community context. A study by Thulitha Wickrama et al. in 2006 integrated these multilevel theoretical perspectives and suggested several mechanisms through which community poverty influences adolescent health-damaging behavior. The paragraphs that follow offer detailed explanations of such mechanisms.

First, the influence of community poverty on adolescent health-damaging behavior may operate through several structural constraints that limit availability of health resources in the community (Sorensen, Emmons, Hunt, & Johnston, 1998). As a result, poor communities are unable to meet their residents' dietary health needs. The structural constraints in poor communities include such factors as unaffordable prices that limit access to proper food, a greater number of unhealthy fast-food restaurants than in higher income communities, a lack of recreational activities and safe areas for physical activities, and unavailability or inaccessibility of health care services. These factors may then contribute to a higher prevalence of unhealthy dietary practices, inadequate exercise, and sedentary behaviors, which subsequently may lead to health consequences such as obesity for adolescents in disadvantaged communities (U.S. Department of Health and Human Services, 1999).

Second, community poverty may influence adolescent dietary practices through the erosion of community norms and values (Wickrama & Bryant, 2003). If community norms and values do not have adequate power to enforce healthy dietary practices, an emergence of "health-related subcultures" associated with increased community-level tolerance for risky lifestyles may adversely influence or affect the motivation for adolescents to properly manage their weight (Browning & Cagney, 2003; Kowaleski-Jones, 2000).

Third, community influence may also manifest itself through adolescent learning, emulating, and cognitive processes. That is, adolescents who live in poor communities are less likely to find positive role models who support and promote healthy activities among youth. Instead, they often may find negative role models who exert negative influences on their health behaviors (Kowaleski-Jones, 2000). This influence can be explained by both the social learning theory (Bandura, 1977) and the prototype perspective. For example, adolescents who are exposed to community members who engage in smoking or unhealthy dietary practices may model or emulate such community members (Wickrama et al., 1999). Similarly, adolescents who operate with favorable attitudes and perceptions of smoking may engage in behaviors that promote smoking (Thornton, Gibbons, & Gerrard, 2002). Thus, this willingness to engage in such behaviors results from opportunities presented at both the community and the individual level (Wickrama et al., 1999).

Finally, community poverty contributes to the erosion of social trust and social cohesion among residents, which in turn results in lower collective efficacy to

acquire health-promoting and preventive services. Collective efficacy emphasizes the willingness of residents to engage in and the capacity to take collective action toward community goals, regardless of preexisting social ties (Browning & Cagney, 2003; Thulitha Wickrama et al., 2006).

## HEALTH BEHAVIOR INTERVENTION

Better understanding of the correlates of physical activity and sedentary behavior in children and adolescents can support the development of effective interventions that promote an active lifestyle and prevent a sedentary lifestyle. These interventions can occur on the individual, family, and community levels.

Individual-level interventions can focus on cognitive factors (e.g., images and willingness) that can be altered to reduce adolescents' willingness to engage in health-damaging behaviors. In addition, active lifestyles involving walking, biking, camping, martial arts, and other ranges of activity (excluding TV viewing, video games, and other screen-based activities) can have some favorable effects on adolescents' health-related behaviors. These physical activities may also contribute to reductions in other health-damaging behaviors through a variety of mechanisms such as providing role models, peer networks, opportunities for teamwork, social development, problem solving, and effective outlets for energy (Gerrard et al., 2005).

Family-level interventions, such as positive parental health behavior, can also contribute to a reduction in adolescents' health-damaging behaviors (e.g., providing role models to adolescents, acting as a buffer against the deleterious effects of low socioeconomic status neighborhoods) and unhealthy peer associations, especially among minority youth (Ellickson & Morton, 1999).

Community-level interventions aimed at eliminating significant health disparities in the neighborhoods (Delva et al., 2006) may focus on distal factors such as homes where parents smoke and neighborhoods where illegal substances are available (Browning & Cagney, 2003; Wickrama et al., 1999). For positive changes in physical activity and dietary behaviors to occur, however, other strategies, including broad-based community efforts, are needed (U.S. Department of Health and Human Services, 2001). Communities must create environments with safe playgrounds and parks, walking and bicycle trails, and neighborhood recreation centers with sports facilities and supervised activities for youth (Lowry et al., 2002). Nutrition education campaigns can be sponsored by public health and community-based organizations. Schools can have a major impact through comprehensive high-quality health and physical education programs that prepare students for physical activity and healthy eating, and by sponsoring after-school programs that provide youth with safe and active alternatives to watching television (Lowry et al., 2002).

## LIMITATIONS

It should be noted that there are a number of common limitations overlaying these studies. The studies by Wickrama et al. (1999) and Tomeo et al. (1999) sampled predominantly Whites and therefore cannot be extrapolated to other races/ethnicities. The studies by D. B. Wilson et al. (2005) and Tomeo et al. (1999) were cross-sectional, and as such, causation cannot be inferred from them. The studies by D. B. Wilson et al. (2005) and Thulitha Wickrama et al. (2006) had self-reporting measures of obesity, which could create bias in the sample.

## CONCLUSION

Despite the aforementioned limitations, these studies collectively call for innovative strategies to promote resilience and protective factors (e.g., proper eating behaviors and regular exercising in addition to encouraging disapproving attitudes toward smoking and obesity) in order to overcome the challenges faced by adolescents and their families. Reduction of health-damaging behavior and disease prevention in adolescents calls for a comprehensive approach that engages the entire community and family as participants and positive role models for adolescents.

**SEE ALSO** Volume 1: *Drinking, Adolescent; Drug Use, Adolescent; Sexual Activity, Adolescent;* Volume 2: *Health Behaviors, Adulthood;* Volume 3: *Health Behaviors, Later Life.*

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# HEALTH CARE USE, CHILDHOOD AND ADOLESCENCE

Health care is an important pathway to improving and sustaining well-being over the life course. Children and adolescents have different needs and concerns in regards to health care than older individuals and these needs differ by factors such as socioeconomic status (SES), race and ethnicity, gender, sexual orientation, and disability, as well as by the diverse contexts in which young people live. Health care use among children and adolescents is important because early detection and intervention has the potential to greatly improve health outcomes in later life. By contrast, inappropriate, insufficient, or poor quality care at this critical early stage in the life course may exacerbate inequities in later life outcomes.

Childhood and adolescence represent two important periods of the life course, generally covering children and youths from ages 0 to 19. Childhood and adolescence are also periods of tremendous growth and accelerated development where, because of the rapid rate of change, the impacts of disadvantage and inequity experienced are amplified (Stein, 1997). Health care access and use have been identified as important intervening factors between social stratification and poor health outcomes across the life course.

## DEFINING AND STUDYING HEALTH CARE USE

Although *health care* is usually discussed as a unified concept, this term actually represents a varied set of interventions that are delivered in different ways, settings, and for different goals to diverse groups of people. Common categorizations divide health care into specific kinds of care, such as preventive, acute, and long-term; primary versus secondary care; or ambulatory versus inpatient care. Preventive care encompasses immunizations and routine checkups, acute care refers to treatment for severe but short-term injuries and illnesses, and long-term care covers treatments for chronic health conditions lasting at least several months. Primary care is a broad term describing the first point of entry into a health care system, which also includes secondary care (specialists and hospitals), as well as a kind of care that is comprehensive and longitudinal in nature (Donaldson et al., 1996). Ambulatory care simply refers to care delivered on an outpatient basis, in contrast to inpatient care, which requires hospital admission. Beyond more instrumental classifications of health care, however, health care is also understood in terms of its symbolic meanings. For example, good motherhood is evaluated, in part, on the basis of how healthy one's child is—and quality of health has increasingly been linked with appropriate health care use. Yet, what is appropriate varies over time, by context, and is, in part, culturally determined.

An important distinction should also be made between health care *access* and health care *use*. Good access is broadly understood to mean an individual's capacity to obtain timely, appropriate, and high-quality medical care at the hands of competent medical providers in an efficient and culturally sensitive manner (American Academy of Pediatrics, 2002). Thus, uninsured sick children using the emergency room as their primary source of care might have comparably higher rates of use but poorer access than healthy, privately insured children who visit a physician once per year. Access also entails how easily one can reach providers, the quality of providers in one's community, and the content and quality of patient-provider interactions. In order to untangle health care use from health care access, many researchers use the concept of *unmet need*, which refers to the gap between the care individuals need and the care they are able to get.

Social scientists study health care use differentials and trends in two main areas. First, they examine health care disparities as either a manifestation of other kinds of inequality, along the lines of race or class in particular, or as a pathway through which early life structural inequalities are translated into differential rates of morbidity and mortality in later life. Although health care access and use inequalities are still important for older children and adolescents, health care is also important in a second way. Social scientists have identified the provision of medical care as a potential site of social control, and for adolescents in particular, the gatekeeping role played by health care professionals over access to information about sexuality, sexually transmitted diseases (STDs), contraceptives, and pregnancy become a significant factor in timely and appropriate reproductive health care delivery.

## INEQUALITY AND HEALTH CARE

Most research in the area of health care inequalities in early life use survey data to document inequalities for specific groups of young people, generally racial minorities and poor youths. Conceptual frameworks linking poor health care access to disparities in child survival and health outcomes have existed at least since the late 1970s, but the data to explicitly link health and health care have been sparse. Despite methodological weaknesses, early life disadvantage has been convincingly linked to poor health outcomes later in life, including shortened life expectancy, heightened risk of obesity, and increased risk for heart disease (Marmot & Wilkinson, 2006). Recent work uses newly available, longitudinal data to link health care inequalities explicitly with health outcomes. For example, in their study using the Fragile Families and Child Well-being Study, a national, longitudinal survey of almost 5,000 children, Erin Hamilton and colleagues (2006) link the reversal of the well-documented Mexican-American infant health advantage to health care disparities. They note that Mexican-American infants experience significantly lower rates of low birth weight and mortality relative to other infants, but lose this health advantage by age 3 as a result of their consistent disadvantage in health insurance coverage, health care access, and health care use.

In the United States, health insurance coverage is one of the most important routes to ensuring good health care access. Consequently, a significant chunk of research on the health care use of American children compares uninsured to insured children and publicly to privately insured children. Health insurance is vital because of the

assistance it provides in covering the frequently expensive costs of even routine medical care. However, the presence and kind of insurance coverage is also related to the likelihood that children experience unmet need for reasons other than cost, the kinds of providers children see, and the quality of medical care children receive. For example, Medicaid, a public health insurance program for low-income individuals and families, covered 40% of all U.S. births in 2002 (Matthews, 2007), but its receipt has been associated with poorer health care access compared with privately insured children because of the systematically lower payments to providers (Smedley et al., 2003).

Problems with health care access are not limited only to uninsured and publicly insured children; the presence and type of health insurance coverage affects children differentially. Janet Currie and Duncan Thomas (1995) found that privately insured African-American children did no better in securing good access to health care than uninsured white children, suggesting that other factors, such as residential concentration in neighborhoods with relatively few or low-quality providers, hostility on the part of health care workers toward Blacks and other racial minorities, and institutional racism embedded in the organization and financing of health care also matter in patterning health care disparities by race and class (Smedley et al., 2003).

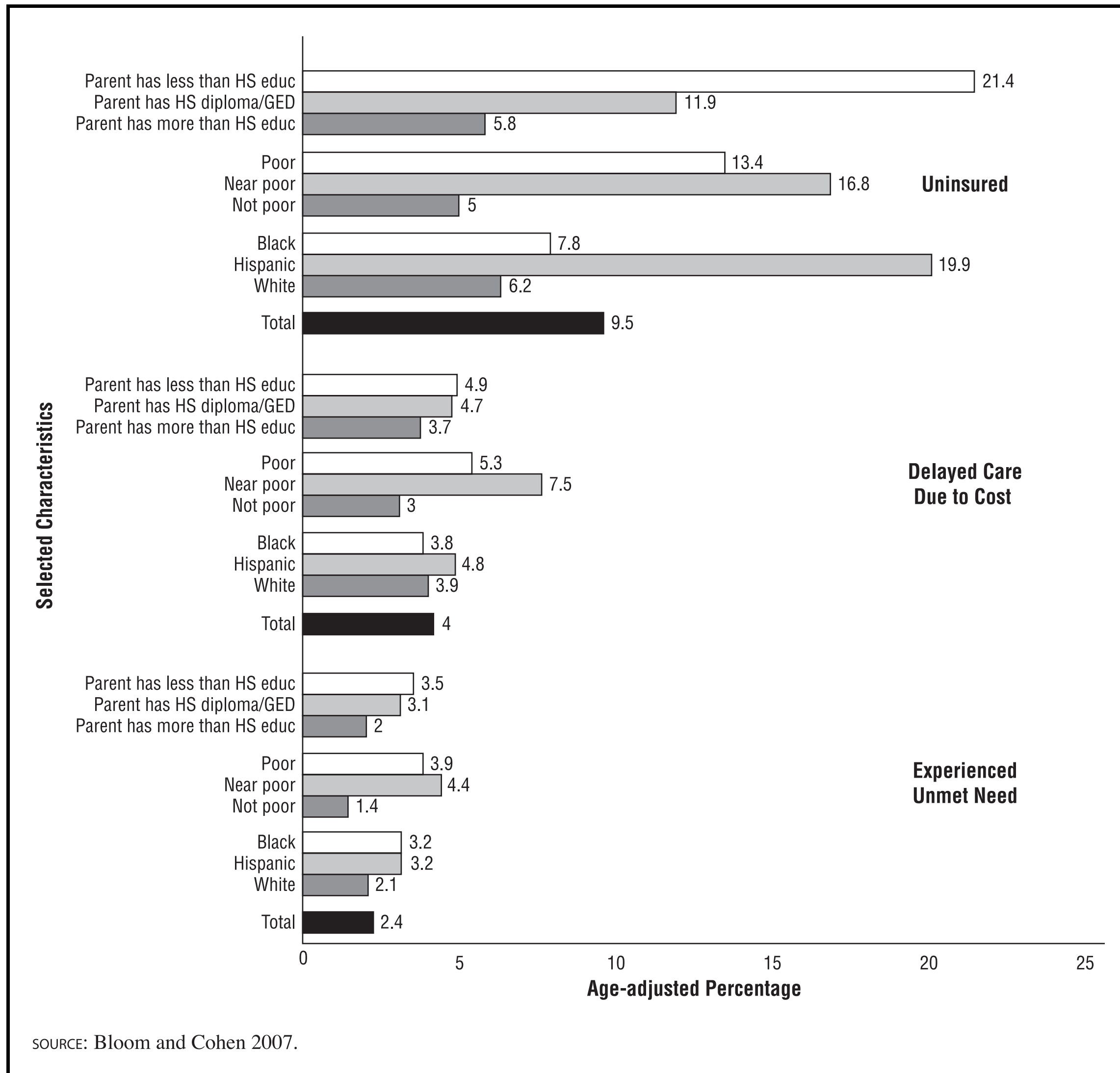
The United States is a special case: It is the only developed country that does not provide some form of universal health care. Despite the lack of universal health care, the United States has the highest per capita expenditures on health care among developed countries, as well as some of the lowest indicators of national health—most significantly, the highest rates of infant mortality in the developed world (Stein, 1997). Countries with universal health care consistently do better in providing citizens with access to primary care, which has been linked to reductions in differentials across population subgroups (Starfield, Shi, & Macinko, 2005).

Over the past decade, the United States has made strides to reduce the number of uninsured children. In 1997, Congress enacted the State Children's Health Insurance Plan (SCHIP) legislation, allocating $40 billion over the subsequent 10-year period for the expansion of health insurance among children. Although the passage of SCHIP legislation has been credited with significant declines in uninsurance among children in poor households (incomes less than the poverty line) and near-poor households (incomes between 100% and 200% of the poverty line), an estimated 2.7 million children eligible for Medicaid or SCHIP remain uninsured (Dubay, Hill, & Kenney, 2002). In 2007, efforts to reauthorize SCHIP failed, but Congress extended SCHIP funding to maintain current coverage levels through March 2009.

## ADOLESCENT REPRODUCTIVE HEALTH CARE

Although adolescents face the same health concerns as younger children, reproductive health care becomes an increasingly important component of primary care. The delivery of reproductive health care also marks the point at which health care differentiates along gender lines. Reproductive health care is frequently associated with family planning, although it also encapsulates STD prevention. Two major research areas on reproductive health care delivery for adolescents are STD transmission and teen pregnancy. While HIV and AIDS infection also looms large as a significant issue, the advent of an effective vaccine against human papillomavirus (HPV) has propelled the prevention of HPV transmission among adolescents to the forefront of public health agendas. Specific strains of HPV are associated with heightened risk of cervical cancer. Worldwide, HPV prevalence rates among women aged between 15 and 74 range from a low of 1.4% in Spain to a high of 25% in Nigeria (Clifford et al., 2005). An estimated 74% of all new HPV infections in 2000 were among American youths aged 15 to 24, resulting in 4.6 million new cases during 2000 in this age group alone (Weinstock, Berman, & Cates, 2004). Following the 2006 approval of Gardasil (a vaccine against HPV) by the Food and Drug Administration, at least 20 states considered bills to make inoculation mandatory for girls in elementary school. The quick movement to adopt mandatory inoculations has spurred a backlash against the vaccine, however, for reasons ranging from fears of increased teen sexual activity, to fears of potential medical complications stemming from vaccination.

Teen pregnancy is a long-standing concern of health care providers. Relative to other developed countries, the United States has the highest teen pregnancy rates (Darroch, Singh, & Frost, 2001), with 68.5 births per 1,000 women aged 15 to 19 in 2006 (Hamilton, Martin, & Ventura, 2007). Although the high rates of U.S. teen pregnancy have been attributed to low and inconsistent contraceptive use among U.S. teens (Committee on Adolescence, 2007), the lion's share of efforts to reduce teen pregnancy focus on transmitting the values of abstinence and waiting, despite the inefficacy of or even heightened risk associated with such programming (Santelli et al., 2006). Another barrier to adolescent contraceptive access is privacy concerns; one national study found that more than 30% of adolescents did not receive needed care because they did not want a parent to find out, yet 29 states require some form of parental consent for the




SOURCE: Bloom and Cohen 2007.

***Figure 1.*** *Health care access measures for U.S. children under age 18 by selected characteristics in 2006.* CENGAGE LEARNING, GALE.

delivery of contraceptive services to minors (Monasterio, Hwang, & Shafer, 2007).

## CONTRIBUTIONS OF RESEARCH TO HEALTH CARE POLICY AND PRACTICE

Scholarly research has proven valuable in evaluating policies and programs, and in identifying how health care inequities in early life impact important outcomes. Nationally representative surveys allow researchers to regularly generate estimates of uninsurance and unmet need among children and adolescents in order to keep tabs on the scope of the problem and measure its progress. Investigations of the impact of un- or underinsurance on short- and long-term well-being allow one to understand how health insurance can ameliorate the increased risks of poor health among minority and low-income children, but also demonstrate that health insurance expansion alone is not a catchall solution. Studies on doctor-patient interactions and work on the efficacy of current interventions targeting teen pregnancy and STD transmission illuminate how the content of health care delivery can impact whether interventions work, and why the same interventions may work differently for diverse groups of young people. Continued research in this area is imperative to maintaining health gains among children and adolescents and new research developments, such as prospective studies of inequality in early life and long-term

health, promise to enhance one's understanding of the relationships between health care inequities and important health outcomes over the life course.

**SEE ALSO** Volume 1: *Health Behaviors, Childhood and Adolescence; Health Differentials/Disparities, Childhood and Adolescence; Illness and Disease, Childhood and Adolescence;* Volume 2: *Health Care Use, Adulthood;* Volume 3: *Health Care Use, Later Life.*

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***Julia A. Rivera Drew***

# HEALTH DIFFERENTIALS/ DISPARITIES, CHILDHOOD AND ADOLESCENCE

*Health disparities* refers to gaps in the quality of health and health care across racial, ethnic, and socioeconomic groups. The term itself has become very important in medical sociology as well as in public health and medicine more broadly over the past several decades in the United States. Outside of the United States, the term used the most is *health inequalities*. Within the United States, this area of research has received more attention because a reduction in health disparities is listed as one of the major goals of the *Healthy People 2010* report, a major goal setting and reporting effort within the U.S. government. As specified by the goals of that project, the United States strives to eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation. Collecting and reporting about data on health care disparities is complex, and this entry will focus on U.S. efforts and data.

## EARLY SOCIOLOGICAL BACKGROUND

Sociological research on inequalities and health has been a long-standing concern in medical sociology, and this concern within sociology is much older than specific U.S. government policy efforts in the area. A large number of studies conclude that people of lower socioeconomic

status (SES) have worse health and lower life expectancies than those from a higher socioeconomic position. While much of this research in sociology has been conducted among adults, there has also been research on children growing up in poverty demonstrating that growing up in such families, as compared to growing up in more advantaged families, leads to poorer health status as a child. More recent research has also begun to focus on differentials in health during childhood as a factor in understanding adult disparities in health, arguing that health disparities linked to socioeconomic position in childhood may have very important, long-lasting impacts. More recent and sophisticated studies still find that people with incomes below the poverty level in the United States have a higher (some studies find two to three times higher) chance of dying early, even when other basic factors such as age, race, and gender are controlled.

## U.S. GOVERNMENT EFFORTS RELATED TO HEALTH DISPARITIES

One of the first attempts by the U.S. government in addressing health disparities was a 1985 report by the Secretary of Health and Human Services (HHS), Margaret Heckler (b. 1931). This landmark report described large, persistent gaps in health status among Americans of different racial and ethnic groups. Because of this report, the Office of Minority Health (OMH) within the HHS was created with a mission to address these disparities. The Centers for Disease Control (CDC), another U.S. federal government agency that focuses on public health and epidemiology, also established its own Office of the Associate Director for Minority Health (ADMH) in 1988 in response to the same report. This unit became the CDC's OMH in 2002, with the mission to promote health and quality of life by preventing and controlling the disproportionate burden of disease, injury, and disability among racial and ethnic minority populations. This unit was expanded in 2005 to create the new Office of Minority Health and Health Disparities (OMHD) in the CDC. The mission of the renamed agency was broadened, with a focus on reducing health disparities experienced by populations defined by race and ethnicity, SES, geography, gender, age, disability status, and risk status related to sex and gender. There have been special programs developed with CDC to focus on adolescent health. One push has been the development of culturally appropriate school programs that address risk behaviors among youth, especially when coordinated with community efforts. The CDC's Division of Adolescent and School Health (DASH) has a mission of preventing the most serious health risks among youths, and tries to incorporate efforts to address health disparities among at-risk communities.

During the same time period, one of the pushes for more research on health care inequalities came from the passage of the Healthcare Research and Quality Act of 1999. This law directed the Agency for Healthcare Research and Quality (AHRQ) to develop two annual reports, one focused on quality and one on disparities. The AHRQ was directed to track prevailing disparities in health care delivery as they relate to racial and socioeconomic factors among priority populations. Priority populations include low-income groups, racial and ethnic minorities, women, children, the elderly, individuals with special health care needs, the disabled, people in need of long-term care, people requiring end-of-life care, and those living in rural communities.

The first National Healthcare Disparities report in 2003 built on some previous efforts in the federal government, especially *Healthy People 2010* and the Institute of Medicine's (IOM) 2002 report, *Unequal Treatment: Confronting Racial and Economic Disparities in Health Care* (Smedley, Stith, & Nelson, 2003). *Unequal Treatment* extensively documents health care disparities in the United States, with a focus on those related to race and ethnicity. One of the weaknesses of this report is that there is not any focus on disparities related to SES. The *National Healthcare Disparities Report* (2003) does have a focus on the ability of Americans to access health care and variation in the quality of care. This report will be discussed in further detail later in the entry.

## DESCRIPTION OF CHILD AND ADOLESCENT HEALTH DISPARITIES AND TRENDS

Most experts agree that for children, as for adults, health disparities can be found in both health and access to health care. The disparities are linked to racial and ethnic impacts and SES. The importance of these differences is one of the reasons why *Healthy People 2010* has listed the elimination of health disparities as one of its two overarching goals and has spent much effort on documenting differences by a variety of factors, with great attention to racial and ethnic differences. Other research also documents the importance of SES for children. Both low SES and minority status have been associated with poorer health in childhood. Children of lower SES are less likely to have contact with physicians at early ages and have poorer health behaviors as they become adolescents, such as higher rates of smoking. In addition, children of lower SES have higher rates of injury and more sedentary behaviors that lead to obesity and poor overall health. They also have more chronic health problems.

Some research now argues that poor health in childhood leads to more health problems in later life and may impact the entire trajectory of a person's life. Similar

findings hold true for many aspects of health and access to health care by minority status. Most of the data in this area has dealt with problems of Black children, although some newer datasets have information on other minority groups, such as Hispanics, as well. In the following sections, most of the data are reported from *America's Children: Key National Indicators of Well-Being, 2007*, a major federal data source on the health of children and a source that incorporates data from the *Healthy People 2010* project.

One of the most important issues regarding health disparities occurs at the very beginning of life, with variation in birth weight. Black, non-Hispanic infants have a much higher percentage of low birth weight as compared to other racial and ethnic groups. From 1990 to 2003, the percentage of low birth weight in that group ranged from 13.1 to 13.6%. The percentage rose in 2005 to 14%. An increase in the percentage of babies with low birth weight was true in other groups also from 1990 to 2005, going from 5.6 to 7.3% among White, non-Hispanic infants and from 6.1 to 6.9% among Hispanic infants. Within the Hispanic category, variation also occurs. Women of Mexican origin had the lowest percentage of infants with low birth weight (6.4%) and Puerto Ricans had the highest (9.8%). One explanation given for better birth outcomes among women of Mexican origin is better nutrition practices in the immigrant generation and stronger family support in that same generation.

Related to this variation in birth weight is another indicator that occurs at the beginning of life and is often thought of as one of the most important ways to compare health status among population groups, states, and countries: the infant mortality rate, which is the number of deaths before an infant's first birthday per 1,000 live births. Black, non-Hispanic and American Indian and Alaska Native infants have consistently had a higher infant mortality rate than that of other racial or ethnic groups. In 2004, the Black, non-Hispanic infant mortality rate was 13.6 infant deaths per 1,000 live births and the American Indian and Alaska Native rate was 8.4, both higher than the rates among White, non-Hispanic (5.7), Hispanic (5.5), and Asian and Pacific Islander (4.7) infants. As with infants who have low birth weight, there is important variation within the Hispanic category. In 2004, the infant mortality rate ranged from 4.6 deaths per 1,000 live births for infants of Cuban origin to a high of 7.8 for Puerto Rican infants.

In the national databases on health problems and health status, only a few other major health indicators have available data for children—these include behavioral and emotional difficulties, activity limitations, obesity, and asthma. Most of the data about behavioral and emotional difficulties come from parents' answers to survey questions. Generally these types of difficulties are first noticed by parents or by teachers in school. Children with emotional or behavioral difficulties may have problems managing their emotions, focusing on tasks, or controlling their behavior. These difficulties often persist throughout a child's development and can lead to lifelong disability. In 2005, children 4 years of age and older from low-income families were slightly more likely to have these problems, with 7% of children living below the poverty level having serious emotional or behavioral difficulties, compared with 5% of children in near-poor families (family incomes between 100 and 199% of the poverty level) and 4% of children in nonpoor families (family incomes of 200% or more of the poverty level). For this health issue, boys have a higher rate of problems as compared to girls. There has been very little variation in this since 2003.

| Race and Hispanic origin | Percentage |
|---|---|
| White, non-Hispanic | 7.9 |
| Black, non-Hispanic | 13.1 |
| Asian | 6.5 |
| Hispanic | 8.6 |
| Mexican | 7.4 |
| Puerto Rican | 19.9 |

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

***Table 1.*** *Percentage of children ages 0–17 with current asthma by race and Hispanic origin, 2005.* CENGAGE LEARNING, GALE.

Activity limitation is a broad measure of health and functioning, generally reported for children from 5 through 17 years of age. It is affected by a variety of chronic health conditions, and thus is a good overall measure of health limitations for children. Activity limitation refers to a person's inability, due to a chronic physical, mental, emotional, or behavioral condition, to participate fully in age-appropriate activities, such as attending school. Using the same categories again of poor, near-poor, and nonpoor families as a measure of SES, 11% of children in poor families, 9% of children in near-poor families, and only 7% of children in nonpoor families had activity limitations. Hispanic children were less likely than White, non-Hispanic and Black, non-Hispanic children to have a parental report of activity limitation. Looking at trends, percentages have increased a small amount, going from about 6% in 1999 to 8% in 2005. As with emotional and behavioral difficulties, percentages for boys are slightly higher than for girls.

Obesity and asthma are also both very important areas of health disparities. Asthma is a disease with

important variation by race and ethnicity and obesity is a health problem that has been increasing in American society overall. It is difficult to compare asthma trends over time because the method of measurement in national data changed in 1997. Rates doubled from 1980 to 1995, but were stable from 1997 to 2005. In 2005, about 13% of Black, non-Hispanic children were reported to have asthma, compared with 8% of White, non-Hispanic children and 9% of Hispanic children. Within the Hispanic population, Puerto Rican children have the highest percentage with asthma (20%), as compared with 7% of children of Mexican origin. Being overweight changed little among U.S. children from 1960 to 1980, with steady increases since then. While only 6% of children between 6 and 17 were overweight in 1980, the figure increased to 18% during 2003 and 2004. In 2003 and 2004, Black, non-Hispanic females aged 6 through 17 were at a much higher risk of being overweight (25%), compared with White, non-Hispanic and Mexican-American females (16% and 17 %, respectively). For males between 12 and 17, there were virtually no differences existing between racial and ethnic groups.

In addition to disparities in health status, disparities exist in access to health care services. Two important factors that impact access to care are whether children are covered by health insurance and whether children have a regular source to use when they need health care services. Tracking whether children have health insurance coverage is often encountered with difficulty because the federal government changed some aspects of their data collection in 2004, making the 2004, 2005, and later data not comparable to earlier data. In 2005, 89% of children had health insurance coverage at some point during the year, a figure very similar to the 2004 figure (90%). All health insurance coverage is not the same, and much health policy work contrasts coverage by private health insurance and coverage by government programs.

Looking first at the earlier data to understand trends, the proportion of children covered by private health insurance decreased from 74% in 1987 to 66% in 1994. The figures then increased to 70% in 1999, and then dropped to 66% in 2003. Looking at the figures for public health insurance coverage, this type of coverage grew from 19% in 1987 to 27% in 1993. Public health insurance decreased until 1999, the year the State Children's Health Insurance Program (SCHIP) began. By 2003, due to the impact of this program's focus on providing health care insurance to children of the working poor (in contrast to Medicaid, which provides coverage to many but not all poor children), public health insurance coverage climbed to 29% in 2003. Racial and ethnic differences do occur in health insurance coverage rates. Percentages from 2005 show that Hispanic children are less likely to have health insurance (only 79%), as contrasted with White, non-Hispanic children (93%) and Black children (88%).

In addition to having health insurance, having a usual source of care makes it more likely that a child will be able to use pediatric services in a timely and appropriate manner. A usual source of care is defined as a particular person or place a child goes to for sick and preventive care. Emergency rooms are not considered a usual source of care in most data sources, including the ones used here, because their focus on emergency care generally excludes the other elements of health care. Overall, only 5% of children in the United States had no usual source of care in 2005. Insurance status is important in whether children have a regular source of care, as is income. Uninsured children are almost 16 times as likely as those with private insurance to have no usual source of care. There are variations by type of health insurance coverage. If children have public coverage such as Medicaid, 4% had no usual source of care versus only 2% of children with private health insurance. Nine percent of children in poor families do not have a usual source of care, as contrasted with only 3% of children in nonpoor families. Children of the near poor report figures of not having a usual source of care that are closer to poor children, with a figure of 8%.

Two other important measures of use of health care services as indicators of access to health care are whether children are immunized and whether children have seen a dentist recently. For immunization, there are data available on whether children have received the doses of five vaccinations that have been recommended for them since 1991 or earlier, by the appropriate ages of 19 to 35 months. These include such well-known vaccinations for polio; diphtheria, pertussis, tetanus (DPT); measles; and chicken pox. In 2005, 81% of children had received the recommended five-vaccine series. Disparities in coverage rates are found both by income and race and ethnicity. Children living in families below the poverty level report coverage rates of 77%, whereas children living above the poverty level have a coverage rate of 83%. White, non-Hispanic children have the highest rates of coverage (82%) as compared with Hispanic children (79%) and Black, non-Hispanic children (79%).

For dental care, some comparative data are available both on whether a child between 2 and 17 years old has seen a dentist in the past year and whether the child has any untreated cavities. Looking first at use of dental care, the percentage of children having seen a dentist in the past year has been fairly stable from 1997 to 2005, with about three-quarters of all children between 2 and 17 having visited a dentist in the past year. For children in poor families, only 66% had seen a dentist in the past year, as compared to 69% of children in near-poor

| Ages 2–17 | Percentage |
|---|---|
| Total | 76.2 |
| Poverty status[a] | |
| Below 100% poverty | 66.2 |
| 100-199% poverty | 68.6 |
| 200% poverty or above | 82.0 |
| Type of insurance[b] | |
| Private insurance[c] | 82.1 |
| Public insurance[c,d] | 71.4 |
| No insurance | 49.5 |

[a]Family income was imputed for data years 1997 and beyond. Missing family income data were imputed for 22–31 percent of children ages 5–17 in 1997–2005.

[b]Children with health insurance may or may not have dental coverage.

[c]Children with both public and private insurance coverage are placed in the private insurance category.

[d]As defined here, public health insurance for children consists mostly of Medicaid or other public assistance programs, including State plans. Beginning in 1999, the public health insurance category also includes the State Children's Health Insurance Program (SCHIP). It does not include children with only Medicare, Tricare, or CHAMP-VA.

SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

***Table 2.*** *Percentage of children ages 2–17 with a dental visit in the past year, 2005.* CENGAGE LEARNING, GALE.

families and 82% in nonpoor families. Coverage for dental insurance is different, in many cases, than is coverage for health insurance, but there is more information available about health insurance coverage. Very few families who have no health insurance will have dental insurance. If children do not have health insurance, only 50% have visited a dentist in the past year, whereas 82% of children with private health insurance have visited their dentist. For children with Medicaid, which generally does include dental care coverage, 71% of children have visited the dentist in the past year. Untreated dental caries (cavities) are the most common health care problem in children. In 2003 and 2004, 25% of all children had untreated cavities. For children living in poor and near-poor families, 29% of children had untreated cavities, compared with 18% of children from nonpoor families. The percentage of untreated cavities is higher for Mexican-American children than for White, non-Hispanic and Black, non-Hispanic children.

This finding of poor dental health among children of Mexican origin has been found in some other recent work that uses the National Health Interview Survey data. Research in the scholarly literature raises some questions about looking in more detail at racial and ethnic groups. A number of studies that have tried to look at disparities within minority racial and ethnic groups and to look more closely at the Hispanic population have concluded that Hispanic children of Mexican origin have poorer access to health care than other Hispanic groups, and that this is true for such factors as physician visits, emergency room visits, and delay in accessing care. Often data are limited for looking at smaller minority groups (such as Asians, American Indians, and even Hispanics if the research tries to break the data down into the specific subgroups within the Hispanic population). Data limitations are often particularly true for information about children.

## COMPLEXITY OF RACE AND SES DISCUSSIONS

One limitation in many of the federal government data sources is that they look at disparities in health and access to health care for race and ethnicity, SES, or by age of the child, but these reports do not take into account the complexity of the interrelationship between race and SES. Some more scholarly articles have used some of the federal data sources, such as the National Health Interview Survey, to try to determine whether childhood health disparities are best understood as effects of race, of SES, or of the synergistic effects of the two. Because SES and race and ethnicity are closely intertwined, researchers need to understand how these factors interact. There are several possibilities. The effect of low SES could be particularly pronounced among minority groups, especially if there is discrimination, which has sometimes been termed the *double jeopardy* hypothesis. A different argument is that low SES could be particularly negative among the native born because immigrants generally have better health than the people left behind or even some of those in the country to which they move, especially if compared to those of lower SES. (This is known as the healthy immigrant effect.) Whites and Blacks are less likely to be immigrants but this could impact Hispanics and Asians.

In a 2006 article in the American Journal of Public Health, Edith Chen, Andrew Martine, and Karen Matthews analyzed race and SES interactions, looking at SES as measured by parental education. In this study, the traditional relation of fewer years of parental education with poorer health was true for White and Black children for overall health, activity, school limitations, and (for Blacks only) chronic circulatory conditions. The relationship with education was often not found for Hispanic and Asian children, and in some situations (respiratory illnesses) was reversed. One suggestion of the authors is that the different gradients across racial groups may be linked to social and cultural values of that group. Perhaps both Asian and Hispanic families share health beliefs and

practice certain health behaviors across education groups, thus diminishing the effect of low education in those groups. A different possible explanation is that Asian and Hispanic children are more likely to be from immigrant families and that there is a healthier immigrant impact, making children in these families less susceptible to the negative impact of lower parental education.

## MAIN THEMES AND THEORIES AND FUTURE TOPICS

More recent government reports raise many concerns about inequalities in all population groups, including children and adolescents. The *National Healthcare Disparities Report* (2003) explores the relationship between race and ethnicity and socioeconomic position. There are seven key findings from the report: First, inequality in quality of care continues to exist and often these are true for particularly serious health care problems; second, disparities come at a personal and societal price; third, differential access to health care often leads to disparities in quality of care actually received; fourth, opportunities to provide preventive care are often missed; and finally, the last three points all relate to the need for more data, more research, and the linkage of those to policy within the United States.

The knowledge about why disparities continue to exist is still limited, and data limitations may limit improvement efforts. A different government report has raised some concerns about data limitations. Measurement issues are of importance for data about health disparities. This is true both in general and in government disparity reports, which this article has referred to a great deal. A recent government report by the National Center for Health Statistics, the part of the federal government charged with collection of health-related data, has argued that there are six important decisions that impact disparities data, including selecting a reference point from which to measure disparity, whether to measure disparity in absolute or in relative terms, and deciding whether to consider any inherent ordering of the groups. These types of choices can impact the size and direction of disparities reported, and can therefore influence conclusions. These are some of the reasons that research on health disparities is complex.

Some recent research suggests that, for children, there may be important differences between the experiences in childhood versus adolescence. SES gradients may not be static across the life span. Though SES gradients were found for global health measures at all ages, there were variations by age on SES gradients for specific acute health conditions. Future research will need to examine pathways emerging in adolescence and that may be linked to development and peer relationships, which may be important in shaping health gradients related to SES. The importance at all ages of SES on global health measures reinforce the importance of understanding the role that social and environmental factors, not linked to developmental processes in childhood, also may play.

There are some new approaches that consider an inequality paradox linked to population level approaches to this topic and some considerations about how to incorporate disparities frameworks into newer work from a health services perspective. These new approaches and critiques provide a summary of what types of approaches that disparities research on children and adolescents may cover in the future. Discussions about how to incorporate disparities frameworks into an overall health services perspective have focused on three phases. The first is detection. This phase emphasizes the definition of health disparities, the identification of vulnerable populations, and an important methods concern, the development of valid measures. The second phase focuses on understanding why disparities exist, including the incorporation of research to identify what factors explain gaps in health and health care disparities between more and less vulnerable groups. The last phase argues for the importance of developing evaluations to reduce health disparities and then implementing and evaluating the success of those approaches.

The inequality paradox, as described by Katherine Frohlich and Louise Potvin (2008), also discusses the idea of vulnerable groups. They argue that disparities in health may be exacerbated by population approach interventions that focus on improving the health of the overall population. The objective of improving population health may not necessarily reduce health disparities and could leave vulnerable populations behind. Vulnerable populations are different than a population at risk. A population at risk generally has a higher exposure to a risk factor. Usually all the individuals in the population will have that higher risk exposure. In contrast, a vulnerable population is a subpopulation or subgroup who is at higher risk, most often because of shared social characteristics. This can be linked to the important idea of fundamental causes in medical sociology. Vulnerable populations concentrate numerous risk factors throughout their life course because of shared fundamental causes that are linked to position in the social structure. Vulnerable populations may be least able to respond to population level interventions, which then improve the health of many, but leave the health of the vulnerable population as it was, thus increasing health disparities.

The Robert Wood Johnson Foundation (RWJF), a major national health foundation, has just issued a new report on how education, race, and ethnicity impact the health of Americans. This report has concluded that the

relationship between how Americans live their lives and the surrounding economic, social, and physical environment may be more important than access to health care in the determination of future health. RWJF has formed a commission to examine these factors and identify innovative ways to improve health for both children and adults, an important future direction in research and policy on health disparities. The commission will pursue strategies for reducing illness, preventing early death, and extending life. In doing this, attention should also be paid to the inequality paradox and the complexity of interrelationships between factors, including the complexity of the interrelationship between child and adolescent health and health in late life.

**SEE ALSO** Volume 1: *Attention Deficit/Hyperactivity Disorder (ADHD); Autism; Birth Weight; Health Care Use, Childhood and Adolescence; Illness and Disease, Childhood and Adolescence; Infant and Child Mortality; Mental Health, Childhood and Adolescence; Obesity, Childhood and Adolescence;* Volume 2: *Health Differentials and Disparities, Adulthood;* Volume 3: *Health Differentials and Disparities, Later Life.*

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***Jennie Jacobs Kronenfeld***

## HIGH SCHOOL DROPOUT

The No Child Left Behind (NCLB) legislation of 2001 has triggered a renewed interest in school dropout. The NCLB legislation is particularly salient because federal law now requires that high schools be held accountable for graduation rates. On a personal level, dropouts are more likely to lack the skills necessary for successful employment and further education, be unemployed, use food stamps and welfare programs, lack health insurance, suffer health problems, and be involved in crime (Belfield & Levin, 2007). Dropouts present numerous challenges at a societal level, including a serious socioeconomic problem, given that most are undereducated and ill equipped to meet the rapidly advancing technological needs of society's workforce. As a result of the increase risk of deleterious individual outcomes, the costs to the society also include (a) the vast loss of taxable income because of unemployment (or underemployment, holding jobs that do not require high school graduation), (b) increased participation of dropouts in social welfare programs, and (c) higher prison funding, as a disproportionate number of individuals incarcerated in U.S. prisons are high school dropouts. Costs due to unemployment, welfare status, and the incarceration of dropouts have been estimated at $240 billion per year (Dryfoos, 1990). Considering inflation and the advancing technological demands of contemporary society, current financial costs would be significantly more.

### DEFINING SCHOOL DROPOUT

Precisely measuring the number of students who do not graduate from high school has been very controversial. Typically, a school dropout is defined as an individual who quits school before graduation and has not enrolled in or completed an educational equivalency program. Although this seems like a simple definition, it is not currently possible to know exactly how many students drop out of school because most states do not follow individual students over time.

The most common method used to determine the educational outcomes of students in the United States is the *status dropout rate*, which is the percentage of an age

group in the civilian, noninstitutionalized population who were not enrolled in a high school program and had not received a high school diploma or obtained an equivalency certificate (i.e., general education degree [GED]). In the United States in 2002, 10% of 16- to 24-year-olds were out of school without a high school credential. Dropout rates of young people ages 16 to 24 have gradually declined between 1972 and 2004, from 15% to a low of 10% in 2004 (Jimerson, Reschly, & Hess, 2008). The status dropout rate remained relatively stable during the 1990s, and there continue to be millions of youths who do not complete high school. For instance, in 2000 it was estimated that about 3.8 million young adults were not enrolled in, nor had completed, a high school program.

Status dropout rates provide a national indicator of school completion rates. However, these methods also count individuals who earn GEDs and other certificates as *completers*, thus important inequities may be obscured. For instance, the rate of GED completion has increased dramatically for Hispanic and African American youth, creating the appearance of a narrowing gap in school dropout rates. However, wages, hours of work, unemployment experiences, and job tenure are similar for dropouts and GED recipients. Moreover, individuals who are incarcerated are not counted; thus, the corresponding decrease in the dropout rate for African Americans may be partially accounted for by the increasing incarceration rate for this group since the 1980s.

Another measure that may be used to estimate school completion rates is the Cumulative Promotion Index (CPI), which approximates the probability that a student entering the ninth grade will complete high school on time with a regular diploma. Consistent with NCLB, students who receive nonstandard diplomas (e.g., certificates of attendance) or a GED are not considered graduates. An advantage of this approach is that it requires only two years of data collection, and because this approach adheres to the definition of the high school graduation rate provided in NCLB, it can be used for accountability purposes. Essentially, this technique estimates the rate of yearly school-leaving for each grade, and the potential pool of graduates is reduced by this percentage for each subsequent year, providing the district with a probability of graduation or estimated graduation rate. Applying this method to U.S. data for 2001, the graduation rate was 68%. As a result of the definition and methodology used, this figure is three times lower than indicated by the status count. Specifically, the criteria of the CPI examine the graduation rate among all ninth-grade students, focusing on receiving the regular diploma, whereas the status count examines the population of 16- to 24-year-olds who were out of school without a high school diploma or an equivalency certificate.

The lack of agreement regarding how to estimate school completion rates has resulted in challenges in comparing rates across states or districts, determining whether schools are meeting accountability standards, and examining the relative effectiveness of prevention and intervention programs.

## DEMOGRAPHIC CHARACTERISTICS OF THE YOUTH WHO DROP OUT

Despite the diverse methods used to measure school dropout, it is clear that in the United States some groups of students are at higher risk for dropping out. Students that are particularly overrepresented among dropouts come from backgrounds of low socioeconomic status (SES) and are often Hispanic, African American, Native American, or have disabilities. U.S. data reveals that dropout rates among the Hispanic youth remain much higher than other ethnic groups, although the rate has declined in more recent years from 30% in 1998 to 24% in 2004 (Child Trends Databank, 2006). Higher dropout rates among recent Hispanic immigrants partially account for the elevated rates. For example, 44% of Hispanics between16 and 24 years old who were born outside the United States were not enrolled in school and had not earned a certificate of high school completion, a percentage more than double the rates for first- or second-generation Hispanic youths born in this country and approximately six times the rate for non-Hispanic immigrant populations (7.4%).

Factors that appear to be most directly related to school dropout include demographic (e.g., male, lower SES, and minority status), academic (e.g., high absenteeism, history of retention, and low-achieving), social (e.g., poor peer relationships), familial (e.g., low family involvement or family stress), and individual domains (e.g., behavior problems and substance abuse). Previous efforts to target students in high-risk groups have not been successful. Instead, prevention and intervention efforts have been found to be most successful at meeting the needs of all students when those efforts are focused on creating school and community systems that help all students to graduate. The change in focus from reducing the incidence of school dropout to increasing the rate of school completion reflects an important shift in contemporary thinking, which encourages practitioners to address this important issue through a wide range of services that include targeted interventions to broad systemic reforms.

## HISTORICAL AND CONTEMPORARY THEORIES INFORMING SCHOOL DROPOUT SCHOLARSHIP

Early research exploring high school dropout mostly focused on student and family variables that appeared

to be antecedents associated with dropping out. Demographic, individual, academic achievement, behavior problems, peer relations, and family factors are those most often considered the major risk factors for dropping out. For instance, male students who are ethnic and racial minorities, from disadvantaged family backgrounds, are low-achieving, display problem behaviors, and have poorer peer relations are more likely to drop out relative to other students. Longitudinal studies designed to understand the phenomenon have mostly examined high school and elementary school predictors of dropping out. Predictors of dropout have been categorized as proximal (e.g., attendance and homework completion) and distal (e.g., SES) variables and, more recently, according to amenability to intervention.

Increasingly, contemporary scholarship has focused on questions of why or how students drop out. Thus, recent studies attempt to articulate multidimensional models to explain the process influencing students' decisions to drop out instead of descriptions of correlates. These models also suggest developmental pathways to dropout that involve family expectations and involvement, early school difficulties, poor peer relations, lack of school engagement, drug use, and cumulative family stress. It is important to recognize that only some of the risk factors for dropping out of high school are characteristics of the students, whereas others are characteristics of the schools these students attend or their family's origin. Dropping out of school is at least partially a product of school practices that are ineffective in promoting the success of all students and of community pressures that fall disproportionately on underprivileged families. Early childhood experiences have been related to school adjustment and dropout or completion years later (Jimerson, Egeland, Sroufe, & Carlson, 2000). The confluence of empirical evidence illustrates that school dropout is best conceptualized as a process that occurs over many years.

Understanding why students drop out of school is important for developing effective prevention and intervention approaches. A comprehensive review of the extant literature reveals that school dropout is typically influenced by social, behavioral, and academic problems in school. Thus, several conceptual models of processes and pathways leading to early school withdrawal warrant consideration. Given the diversity among dropouts, each of these models is helpful in considering the multiple influences and pathways that may result in school withdrawal.

An early model of school dropout developed by Ruth Ekstrom, Margaret Goertz, Judith Pollack, and Donald Rock (1986) described a multifaceted pathways model of a student's decision to drop out or stay in school. This model included demographic factors (e.g., SES and ethnicity), the family educational support system, the student's school performance, and the previous behaviors warranting discipline as influences on the student's decision to drop out or stay in school. This model also emphasized that problem behaviors and grades were partially determined by the home educational support system. Although this path model was used specifically to examine high school data, these factors are also important in elementary school.

Jeremy Finn's (1989) participation-identification model emphasized that students' active participation in school and in classroom activities and feeling of identification with the school affected school completion. "Identification with school" referred to an internalized conception of belonging and valuing school success. From this perspective, lack of school engagement was central to the process of dropping out. Engagement is composed of student behavior (involvement with classroom and school activities) and identification with school. The participation-identification model explained dropout in terms of a behavioral antecedent (lack of participation) and a psychological condition (lack of identification). It portrayed dropping out as a process of disengagement over time rather than as a phenomenon that occurs in a single day or even a single school year. Participating in the school environment includes attending school, being prepared to work, and responding to the teacher's directions and questions. Other levels of participation include students' initiative to be involved in the classroom and school, participation in social and extracurricular activities, and involvement in decision making. This model has a developmental emphasis in that it reflects how participation in the school environment changes as students progress through school with greater opportunities to become involved in the nonacademic aspects of the school environment.

Ian Evans and Adria DiBenedetto (1990) provided four possible pathways that focus on the interaction of the individual and school factors that lead to early school withdrawal: (a) unexpected events, (b) long-term underlying problems, (c) early skill deficits, and (d) entry problems. Consistent with Finn (1989), these authors suggested that dropouts can be better identified by examining behaviors rather than searching for predetermined characteristics of students. Moreover, they proposed that dropping out may be characterized by a snowballing effect, wherein events that occurred early impact subsequent events.

The first pathway emphasized unexpected events such as a pregnancy or the death of a loved one occurring that subsequently influences school enrollment. Such unforeseen events may be more likely to appear in certain contexts, and thus these events are not completely

unexpected. Moreover, adaptation and coping following these unexpected events will also be influenced by the context and support available to the student.

The second pathway focuses on long-term underlying problems. Students on this pathway may not display any psychological difficulties, but over time the student engages in deviant behaviors, perhaps begins to associate with maladjusted peers, or possibly begins using drugs, which ultimately influences school enrollment. Clearly this pathway takes time as the student follows a deviant pathway that may ultimately lead to school dropout.

In the third pathway, a student may possess cognitive or social deficits that interact over time and influence school enrollment. For example, a child who experiences early reading difficulties may subsequently lack the motivation to continue to struggle with reading. The student may also be shy or may be actively neglected by peers because of his or her academic performance, and over time both dimensions may interact and result in early withdrawal.

The fourth and final pathway recognizes that some children begin school with emotional or behavioral problems. For instance, if a student is immature and overactive, this is likely to lead to problems with classroom behavior and possible struggles with teachers, and over time the student may dislike school and ultimately choose to withdraw.

As illustrated in the above models, numerous pathways may potentially lead to school dropout, and thus it is particularly important to consider the multiple influences that may facilitate school completion. Each of the models emphasizes the combined impact of diverse influences across the individual's development (including social, behavioral, and academic considerations). However, many of these models fail to recognize the role that school environmental factors play in school dropout. For example, large school size is positively correlated with decreased attendance, lower grade point averages and standardized test scores, higher dropout rates, and higher crime than smaller schools serving similar children. School practices, such as tracking and grade retention, have a negative correlation with school completion rates independent of the students' ability level. Other school-related factors such as high concentrations of low-achieving students and less qualified teachers are also associated with higher dropout rates.

## FUTURE SCHOLARSHIP PROMOTING SCHOOL COMPLETION

Considering the multiple pathways that may lead to school dropout, an array of potential intervention strategies have been developed to facilitate the academic success of students who may be at risk of dropping out. It is important that scholars and professionals seek further understanding and knowledge of the individual strengths and needs of youths and be prepared to provide appropriate prevention and interventions to promote their success. There are currently numerous studies across the United States that aim to promote school completion and reduce school dropout. A multifaceted California Dropout Research Project (2008) aims to synthesize existing research and undertake new research to inform policy makers and the larger public about the nature of—and potential solutions to—the dropout problem. In addition, the Institute of Education Sciences (2008) has posted a report on the effectiveness of programs to prevent school dropout. Such contemporary science aims to enhance understanding and identify effective strategies to promote school success and school completion among students in the United States.

**SEE ALSO** Volume 1: *Cognitive Ability; College Enrollment; Employment, Youth; High School Organization; High-Stakes Testing; Policy, Education; Racial Inequality in Education; School Tracking; Socioeconomic Inequality in Education; Vocational Training and Education.*

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***Shane Jimerson***

# HIGH SCHOOL ORGANIZATION

One critical element of examining the life course of adolescents centers on examining those experiences held in common—the defining features or events that characterize being a teen in the United States. Whereas many of these common experiences, such as church attendance, volunteer organizations, or scouting, have fragmented over the period from 1960 to 2000, the role played by the modern American high school has become more common and defining (Dorn, 1996). In many ways, going to high school is one of the few experiences that a wide variety of American teens have in common, and, although there are certainly variations in that experience, the typical structure and organization is surprisingly similar across the United States.

## BASIC STRUCTURE OF THE AMERICAN HIGH SCHOOL

According to U.S. Census data, by the year 2007 there were 15.1 million students enrolled in public high schools and 1.46 million students in private high schools, the highest point projected during a steady increase since 1970. This division identifies the two primary classifications of high school: They are either (a) publicly funded through tax dollars, a designation that includes comprehensive high schools, schools of choice and magnet schools, as well as Department of Defense and Bureau of Indian Affairs high schools; or (b) privately funded, through religious organizations, private institutions, or private funding supplemented with individual tuition. The two most common configurations of high school are those including grades 9 through 12 and those including only grades 10 through 12. Using the most recent national database (the Educational Longitudinal Study of 2002) as a reference, the average size of American high schools as of 2002 was about 1,400 students, with 22% of the high schools smaller than 800 students and 18% larger than 2,000 (Planty & DeVoe, 2005). Typically, the local decision to expand or restrict grade levels in a high school has more to do with the building resources relative to student population than any overarching difference in educational approach or student success.

Curriculum offerings in the modern high school are measured by content and amount. Content designations break broadly into "academic" subjects—mathematics, sciences, English language arts, social sciences, and foreign languages—and "nonacademic" subjects—physical education, music and arts education, technology education, career and vocational education, and life skills. Across these different subject areas, one may find any number of different individual courses, typically ranging from 100 to 300 individual classes in the overall course offerings for one high school. The amount of instruction can be measured by credit, by semester, or by hour, but the standard form used to report how much curriculum a student receives (especially in college applications) is based around a Carnegie unit, which currently corresponds to 120 hours or 7,200 minutes of instruction. The determination of Carnegie units originated in 1906 by the Carnegie Foundation, with 14 units deemed to be the minimum number required for college preparation (Boyer, 1983). Since its institution, a far more complex formula has become standard, based on determination of the content over an 18-week semester (regardless of actual length of the term) as lecture, lab with homework, or lab without homework.

Finally, the modern high school curriculum continues to be differentiated by difficulty level, ranging from "basic" to "advanced" in most academic courses. In some areas (particularly in social sciences and English language arts), the division by difficulty uses the same content for each level but modifies the work demands by complexity. For example, three different levels of an American history course might all cover the Revolutionary War, but at the lowest level students are answering fact-based questions from the text, whereas at the highest level students are writing essays based on original sources. In other areas (particularly in mathematics and sciences), the division by difficulty dictates different content, as the material taught builds sequentially by knowledge complexity. In these situations, lower-level students may never be introduced to higher-level concepts.

This division has recently come under criticism, as the focus of high school is shifting more toward preparing all students to attend college. Although the specific criticism relates to differentiating students across topics at one difficulty level, the problems are inherent even when only one content area offers content separated by difficulty level. In particular, private high schools tend to emphasize a more constrained curriculum, with

fewer choices and a general orientation toward college-preparatory material. In general, the content of a high school curriculum is quite complex, with an ongoing emphasis toward individual selection even in the face of pressures for a more constrained curriculum.

With noted exceptions, classes in high school tend to average around an hour in length, allowing for five to seven classes in a day, five days per week. Within this paradigm, an hour typically includes time to travel between classes, transition time, and orientation, leaving between 20 and 40 minutes of instructional time (Planty et al., 2007). Some content areas (such as the performing arts) may cover more than one period, but this arrangement is commonly found only in private high schools. The more common public school exception to this structure schedules around blocks of time, trading class length for class frequency. There are no fewer than five common block structures, varying the length of the block (from 80 minutes to 4 hours), the frequency of classes in a week, and the configuration across the school year. This alternative to traditional scheduling began with criticism in 1994 from the National Education Commission on Time and Learning (Education Commission of the States, 1994). However, subsequent research on the success (or even the successful implementation) of blocks of time in improving learning at the high school level is at best mixed (Zepeda & Mayers, 2006). Typically, high school course offerings in most settings operate in five top seven 1-hour blocks of time, providing about 200 minutes per week of instruction in any given subject area (Education Commission of the States, 1994).

## HIGH SCHOOL ORGANIZATIONAL STRUCTURE

Although schools vary extensively across the spectrum of organizational structure, high schools typically most closely adhere to an organizational style described as bureaucratic or mechanistic (Rowan, 1990). The defining features characterizing the work environment of a high school consist most typically of the following components: (a) top-down authority and decision-making concerning school-wide decisions, centering on the principal (in public schools) or director (in private schools), combined with (b) departmental structures governing classroom curriculum and (to some extent) instruction, with (c) little if any daily contact between teachers or administrators across classroom boundaries, originally termed a "loosely coupled" organizational structure (Weick, 1976) and now more generally understood as "organic" in nature (Rowan, 1990). These components are perhaps best understood in terms of their associated political and social pressures, navigating internal and external requirements.

Of any grade-span configuration, high schools (regardless of size) typically have the most complex administrative structure of the different grade-level configurations. For example, it is not uncommon for a high school to have, in addition to a principal (public) or director (private), a set of vice or assistant principals/administrators, each with their own secretarial organization and separate responsibilities. The purpose of this complex administrative structure is to negotiate the outside pressures and concerns that regularly affect high schools. The administrators in a high school must coordinate several different external connections between the high school and the community (including all extracurricular activities, especially sports events), the high school and the state requirements, and finally the high school and advanced opportunities for students (including the military, different college recruiting programs, and vocational programs that place students with outside agencies). In general, the primary role of a high school administrative team is not to provide instructional leadership; rather, it is to negotiate the needs of the high school teachers and students within the larger community and state context.

Given these external requirements placed on high school administrators, much of the school's instructional leadership develops within the specific content area(s), coordinated by a department leader or chair. The formality of this departmental structure varies by the size of the institution, but typically it is within the small group organization that curriculum and (to some extent) instructional decisions are made (Daniels, Bizar, & Zemelman, 2001). Individual teachers within a department commonly bring back new ideas, content, instruction, or assessment innovations from conferences or external training experiences to shape innovation in the material taught in that content area. The focus of attention might be guided by accreditation requirements, external testing requirements, or even the goals held by postsecondary institutions. Whatever the focus, however, instructional leadership at the high school level typically takes place within specific content areas.

However, even within these more tightly knit organizational units, the actual decision making concerning daily instruction typically takes place within the classroom itself. Teachers at the high school level most commonly operate largely unobserved and unmonitored within their own walls (Boyer, 1983; Rowan, 1990). Unless curriculum units undertake a common assessment of classes, the material covered by any individual instructor may be unrelated to that of any other instructor, even within the same department. Even when tests are taken together, the process of delivering instruction may differ dramatically from classroom to classroom, hinging largely on the teacher's own views of student learning (Menlo & Poppleton, 1999; Wilen, Hutchison, & Bosse, 2008).

### RESEARCH AND STUDY OF AMERICAN HIGH SCHOOLS

Ongoing efforts to study and ultimately reform American high schools typically orient toward one of two basic goals: to increase the opportunity for students to succeed across social strata or, alternately, to promote individual excellence in educational paths that will not end at 12th grade (Hammack, 2004). Primarily because of compulsory education laws, but also because of external limitations placed on the job market, high school is generally the first exit point from one's educational path. High school dropouts are a serious concern not only of the school system, held accountable for each failure to completely educate and graduate a student, but also for the society carrying the burden of a potentially undereducated citizen. Employers are increasingly requiring higher education credentials for positions, even where higher education is not necessary for the function of the job (Bracey, 1996). Since the 1960s, the nation's economy has slowly and steadily shifted away from the manufacturing sector toward a service sector. The loss of manufacturing jobs, accelerating as a result of technological advances and global competition, means that well-paying jobs that require limited formal education are quickly disappearing and are being replaced by careers in the technological and professional field, arguably requiring higher formal education (Hammack, 2004).

In addition to the struggle between individual and social opportunity, high schools in the early 21st century also must deal with the increased accountability mechanisms that have been a keystone reform effort of the start of the 21st century. In 2001, the No Child Left Behind Act (NCLB) was initiated and had an immense impact on educational reform at all levels. Its mainstay was a reliance on standardized testing at the local, state, and national levels in order to continuously track student progress (Planty et al, 2007). The impact of this increase in school accountability has had serious ramifications at the high school level. Current research investigates whether this level of external federal policy pressure has had an impact on raising test scores, reducing the dropout rate, or increasing 4-year on-time graduation rates. In addition, research continues to explore the possible impact such efforts have had on students who are not able to earn credits at the scheduled pace, students who have learning disabilities, or students who experience family, health, psychological, monetary, or legal difficulties. These challenges confronted by high schools, converging in the face of budget cuts and underfunded federal mandates, will require specialized programs and sufficient funding in order to adequately meet the graduation requirements set out by NCLB.

**SEE ALSO** Volume 1: *Academic Achievement; High School Dropout; High-Stakes Testing; Policy, Education; School Culture; School Tracking; School Transitions; School Violence; Stages of Schooling.*

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***Julia B. Smith***

## HIGH-STAKES TESTING

Notwithstanding a tawdry history that tracks testing back to the eugenics movement (Lemann, 1999), "the call for relevance, for clarifying the relationship between what is

taught in high schools and later life" (Grubb & Oakes, 2007) is at the root of contemporary standardized testing in the United States. In essence, the motivation for standardized testing for the country is anchored in the "excellence movement" driven primarily by an economic labor-market frame. The history of massive standardized student testing in the United States began as a response to international competition in the fields of science and technology with progressive countries such as Japan, South Korea, and Germany. While some states such as New York have been implementing standardized tests since the 1800s, the national agenda in the United States for standardized tests began in earnest after the launching of an unmanned satellite mission called Sputnik by the Soviet Union in 1957. Testing was again reinforced after the publication of the landmark *A Nation at Risk* (1983), which claimed that the poor quality of the nation's public school system explained why the United States had not advanced as far as other countries in the areas of industry, commerce, science, and technology.

In order to enhance the academic rigor of American schools and thereby improve student performance, several unique but loosely interconnected policies such as the Elementary and Secondary Education Act of 1965 and its successive reauthorizations in 1994 as the Improving America's School Act and in 2001 as the No Child Left Behind Act, together with the birth in 1969 of the National Assessment of Educational Progress, collectively gave rise to the high-stakes testing policies of the early 21st century (Lemann, 1999). Although the 1950s scare of the United States being left behind in the fields of science and technology drove these policies, achievement gaps between the United States and other industrialized countries on international exams such as the Programme for International Student Assessment persist. That is, in comparison to students from other Organisation for Economic Co-operation and Development countries, American 15-year-olds consistently score below average (Baldi, Jin, Skemer, Green, & Herget, 2007). In any case, international performance and the move toward a more global market keeps the issue of high-stakes standardized testing in the forefront as a viable, if controversial, educational policy direction (Heubert & Hauser, 1999) as researchers (Darling-Hammond, 2006; Valenzuela, 2002, 2004) argue that multiple criteria measures offer a more holistic and valid measure of student ability and performance.

## DESCRIPTION OF THE HIGH STAKES ASSOCIATED WITH STANDARDIZED TESTING

High-stakes standardized tests are exams administered to students with "stakes" or "penalties" that are levied on the student, teacher, school, school district, or state as a result of student performance. These examination systems are designed to simultaneously achieve four goals: induce teachers to set high standards, motivate students to learn what is being taught, recognize and reward them when they do, and assist in the sorting of students across different post-secondary programs and employment options (Bishop, 1998). Proponents of high-stakes exams purport that the rewards and penalties that are attached to student performance on tests strengthens the accountability mechanisms that are in place and help to ensure that teachers are on task and actively engaged in student learning and that students take schooling seriously (Nichols & Berliner, 2007). In contrast, opponents suggest that these stakes exacerbate existing gaps in opportunity and equity across varying demographic groups (Heubert & Hauser, 1999; Valenzuela, 2004). Using a single test for high-stakes decisions is also against the guidelines of assessment use put forth in the ethical and professional standards maintained by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (AERA, APA, & NCME, 1999). These opposing views help sustain the continuing debate on the purpose and appropriate use of high-stakes tests.

The exams used for high-stakes testing vary from state to state, and in some cases from school district to school district. The most recent iterations of high-stake testing policies point to those mandated by individual state legislatures that require students at a particular promotion gate (or gates) to pass a standardized exam and, possibly, as a condition of graduation as well. Students in states where such policies exist must pass an exam (or a series of exams) in order to advance either to a particular grade (or grades) or pass an exam in order to receive a high school diploma. These policies place the "stake" at the student level and students are often held back a grade or denied a high school diploma as a result of not meeting the testing requirements. High-stakes testing policies and results are often highly contested by parents and educators.

There are high-stakes policies, particularly at the local and federal levels, such as those instituted by the No Child Left Behind Act, that attach "stakes" to test scores at the school, district, and state levels. Schools are penalized through corrective-action measures when students either in the aggregate or as part of one of several disaggregated groups fail to achieve performance benchmarks from year to year. The "stakes" at the school level range from allowing students to transfer to another public school, which can have the effect of decreased enrollment and, as a consequence, decreased per-pupil funding, to more drastic measures such as removing all of the school faculty and administrators and closing down the school.

Some school districts are implementing their own versions of high-stakes policies. For example, in 2006 the Houston Independent School District's Board of Education unanimously approved a merit pay program that gives teachers additional monetary bonuses if their students perform well on standardized tests. Merit pay bonuses are contested by national teachers unions such as the National Education Association and the American Federation of Teachers, which cite evidence that test results should not be sole measures for teacher performance, and by scholars such as Darling-Hammond (2000), who suggests that merit pay discourages teachers from teaching students who are at the highest risk of failing.

## WHAT DO THE EXAMS LOOK LIKE?

About half of the states in the United States have passed legislation that requires all high school students to take and pass an exam in order to receive a high school diploma. These take one of three forms: minimum competency exams (MCEs), standards-based exams (SBEs), and end-of-course exams (EOCs). Minimum competency exams generally measure a student's attainment of basic educational knowledge and skills (Heubert & Hauser, 1999). As early as 1971, two states mandated the use of MCEs, and this number gradually increased to 15 by 1976 (Jaeger, 1982). Many states are moving away from MCEs to more rigorous exams—what Bishop (1998) refers to as curriculum-based exit exams.

In 2006 the Center on Education Policy reported that 10 of the 18 states that were implementing exit exams in 2002 were using MCEs, whereas in 2006 the same study reported that only 3 out of 22 states were using MCEs. Unlike most MCEs, SBEs are generally aligned with state academic standards. The number of states using SBEs as a graduation requirement increased from 7 in 2002 to 15 in 2006. Like SBEs, EOC exams are generally aligned with course content, but students take these after completing their course work. States are also showing an upward trend toward the use of EOCs, primarily because these exams tend to have a more direct link to what students are learning in the classroom. In 2002 only two states, New York and Texas, used EOCs as part of the high school graduation requirement. The number doubled by 2006 and is expected to be as many as nine states by 2012.

## DEMOGRAPHIC DISPARITIES AND THE LINK TO GRADE RETENTION AND DROPOUT

General demographic performance trends on standardized tests indicate that the racial and ethnic gaps in achievement still exist. The growing disparities that lie between White and Asian students and their Hispanic and Black counterparts, those who are fluent in English and those who are not, and students with disabilities and those without are extreme (Heubert, 2001). Valenzuela (2002) found that because of their language-dependent nature, the tests are neither valid nor reliable for English language learners.

One such example of the negative impact of high-stakes exams on race, ethnicity, and language minorities can be found in California, which has a large percentage of students who are Hispanic and English language learners. Results from the 2006–2007 California High School Exit Examination (CAHSEE) show that the disparities persist. A random coefficient model analysis conducted by the Human Resources Research Organization (HumRRO) indicates that Black students on average scored 22 points lower than White students in math and 18 points lower in English language arts. In this same analysis, Hispanic students scored 11 points lower than White students in math and 10 points lower than White students in English language arts (HumRRO, 2007). This same report showed that the pass rate for English learners dropped from 31% to 27%.

States have taken varying approaches to how they deal with the disparities in student pass rates. In Georgia, the cut scores are adjusted to allow for lower failure rates, and this adjustment thus accounts for some of the declining gaps between demographic groups (Fordham Foundation, 2005; Scafidi & Robinson, 2006). Other states adhere to similar practices. The state of Washington has pushed back the dates on which the graduation penalties for the new tests are implemented in order to give students an opportunity to learn the material before the requirement to withhold their diploma is implemented (Senate Democratic Caucus, 2007). California followed a similar phased-in approach for the CAHSEE. These approaches do not necessarily predict student success, and some argue that the pressure itself of having high-states testing policies predicts failure (Clarke, Haney, & Madaus, 2000; Nichols & Berliner, 2007).

There has been an ongoing debate about whether states that put in place more stringent graduation requirements based on performance on high-stakes tests obtain higher rates of retention and dropping out. In their analyses of national data, researchers Nichols and Berliner (2007) demonstrate that these high-stakes assessments have the effect of increasing dropout rates and contributing to higher rates of retention in grade. These effects are notably pronounced and pose long-term negative consequences for poor and minority students. Valencia and Villarreal (2005) show that dropout levels are likely to increase the more times a student is retained. Their research also finds that although all groups of children start school at about the same age, by ages 15

***Testing Gap.*** *Tenth grade students take a chemistry test while in class at Springfield High School in Springfield, Ill. An Associated Press analysis of new state data found an average 28% gap statewide between the percentage of elementary pupils meeting or exceeding standards on tests and high school students doing the same.* AP IMAGES.

to 17, approximately 45% of African-American and Hispanic youth are below the expected grade level for their age.

## RESEARCH AND DIRECTION OF HIGH-STAKES EXAMS

In addition to recent studies that show a link between high-stakes exams and retention and dropout, there is a growing amount of interest and literature around opportunity to learn and value-added approaches to measurement. These discourses are anchored in an equity critique of how students learn and are educationally prepared, as opposed to how well they are tested. Scholars argue that these equity concerns are more fundamental to long-term success than the technical debates on how to alter tests and accountability systems to get improved results (Scheurich, Skrla, & Johnson, 2000). Future research is likely to take into account individual student growth over time and not static measurements at policy time points.

SEE ALSO Volume 1: *Academic Achievement; College Enrollment; Gender and Education; High School Organization; Policy, Education; Racial Inequality in Education; Socioeconomic Inequality in Education.*

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# HOME SCHOOLING

Home educating children has become increasingly popular in the United States. The home schooling movement originated in the 1960s within the countercultural or libertarian political left. By the mid-1980s, however, the religious right was leading the movement. Throughout the 1990s and into the 21st century, the number of home schooled children in the United States grew tremendously. The movement has come to be considered mainstream as home schooling is advocated for a variety of reasons and has become much more publicly acceptable. This topic is important to life course scholars given that education is a major social institution that transmits societal norms, values, and a knowledge base. As an alternative to public and private schools, home education provides children with a different socialization experience. This specific educational alternative should be examined for its impact on society.

## STUDYING HOME SCHOOLERS

The social scientific study of home schooling in the United States began to take off in the late 1980s as at least 250,000 children were being educated at home. Over the next 20 years numerous studies of this population were published. Nonetheless, although the quantity of evidence is notable, the quality of the scholarship is less than ideal. As many scholars have noted, home schoolers are a difficult population to study. They are geographically dispersed, and there are no reliable lists from which a representative, random sample can be drawn. Some states do not require home schooling

***Lesson Plan.*** *Alison Pittman, right, and her daughter, Adrienne, 10, work on reading skills while Daniel Pittman, 15, left, gets ready to get to work on his English lesson at the Pittman's home in Petal, MS.* AP IMAGES.

families to register, and some parents refuse to either way. Moreover, many home schoolers hold alternative worldviews and are unwilling to participate in studies by unknown researchers.

Estimating the number of home schooled children in the United States is politically contentious. Critics have interests in portraying the movement as marginal, whereas advocates seek to stress its prevalence. Thus, government estimates are considerably lower than those given by advocacy groups. Data from the 2003 National Household Education Survey (NHES) indicates that an estimated 1.1 million children were home educated that year (up from an estimated 850,000 in 1999). Given a similar rate of growth, the estimate for 2007 can be increased to 1.4 million. By 2007 some advocacy groups were estimating that the number had reached more than 2 million.

The majority of research studies on home schoolers is qualitative in nature, based on interviewing and/or observing relatively small numbers of parents and their children. These studies tend to find participants through local networks and associations and then ask them for referrals to other local home schooling parents. Several studies are quantitative and employ sophisticated statistical analyses. These are often based on surveys of members of home schooling organizations. Response rates in these types of surveys tend to be problematically low. Other quantitative studies (such as the NHES) are based on telephone surveys of large-scale, random samples of American adults with school-age children. Home-educating parents are part of this population, but it is difficult to assess whether they differ from parents of publicly and privately schooled children in regard to having a landline telephone, answering it, and actually participating in the survey.

## MAJOR FINDINGS ABOUT HOME SCHOOLING

There are only a few major areas of inquiry in the home schooling scholarship. Most important, scholars (as well

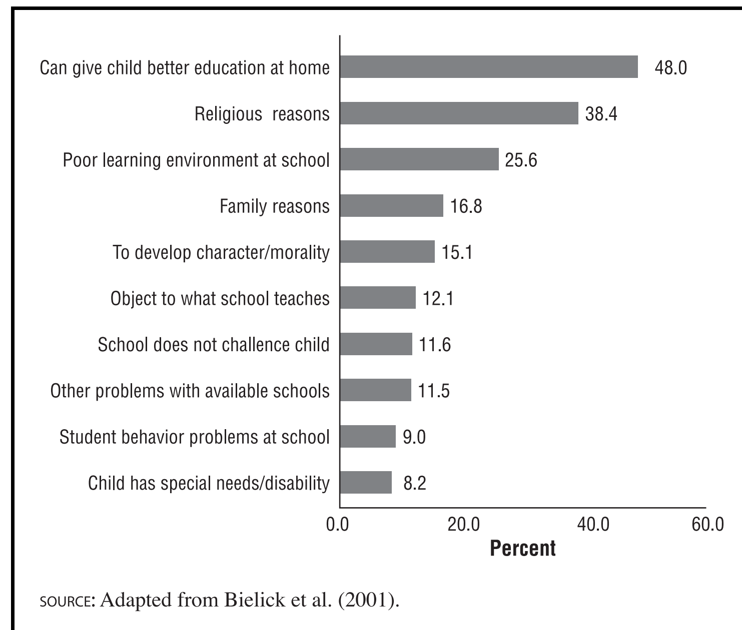


***Figure 1.*** *Ten reasons for home schooling and the percentage of home schooled students whose parents gave each reason, 1999.* CENGAGE LEARNING, GALE.

as policymakers and the public) want to know the reasons why parents choose to home school their children (the inputs), who it is that does it (the demographics), and what is accomplished in doing so (the outputs). The literature indicates that the motivations for home schooling as well as the demographics of who home schools have changed across time. Regarding outputs, the focus has been on three primary topics: the socialization and academic performance of home schooled children as well as the long-term effects into adulthood.

Early studies of motivations to home school identified two major groups: *pedagogues* and *ideologues*. The pedagogues tended to be leftists on the political spectrum and stood against the bureaucratization and professionalization of public schools. These do-it-yourselfers sought personalization and decentralization under family control. The ideologues came largely from the political right, crusading against the secular forces of modern society, and seeking to impart religious values to their children. Although many commentators and much of the public continue to associate home schooling with the religious right, this segment of home schoolers has been declining. The majority of home schooling parents are not motivated by religious reasons.

As the movement grew in the 1990s and early 21st century, it became much more diverse. Home schooling is now advocated for a variety of reasons from average, mainstream Americans. Overall, there is a general consensus among researchers that there are four broad categories of motivation (and considerable overlap). Academic/pedagogical concerns and religious values certainly continue to be prevalent. In regard to the former, 48.9% of the home schooling parents who responded to the 1999 NHES survey indicated that they were motivated by the ability to give their child a better education. This type of response reflects the fact that, for many parents, home schooling is a positive choice rather than just a reaction against public schools. Also, according to the 1999 NHES, only 38.4% of respondents reported that they were motivated by religious reasons. In the 2003 NHES, 29.8% of respondents chose "to provide religious or moral instruction" as their most important reason for home schooling.

In addition to pedagogical and ideological reasons, home schooling parents also cite their general dissatisfaction with the public schools and family lifestyle reasons. The public school criticism usually takes two forms. First, there are environmental concerns such as safety issues and the potential for negative peer influences. Second, there are curricular concerns surrounding standards-based education and high-stakes testing resulting from state and national government initiatives (such as California's Public Schools Accountability Act of 1999 and the national No Child Left Behind Act of 2001). Finally, although they are the least common of the four, family lifestyle reasons are very important for some parents who decide to home school. This diverse set of motivations includes the inflexibility of the public school schedule, having children with special learning needs, and having children with unique abilities.

As the home schooling movement has grown, the demographic profile of its participants has changed. The pedagogues of the 1960s and 1970s and the ideologues of the 1980s were fairly homogeneous groups. Research from the mid-1990s through the middle of the first decade of the 21st century is quite consistent in regard to the demographics of who home schools. These families differ from the average American family in that they are more likely to be White, to be headed by a married couple, to have greater numbers of children, to be headed by college-educated parents, to have larger annual incomes, and to be state-certified to teach. Mothers usually provide about 90% of the home instruction, and most are not in the paid labor force. The fathers are more likely to work in professional/technical occupations or be self-employed. The importance of religion for some home schoolers also makes this population more likely to be socially and politically conservative and have stronger religious values than average Americans.

Even though home schooling has become less polarizing as an issue, research concerning its effects is still likely to be of the greatest interest. Many studies have documented that home schooled children do not suffer in terms of self-esteem or self-concept (an indicator of positive socialization). A few studies provide evidence that these children are better socialized than their public school counterparts. Indeed, some argue that it is in formal education settings that students experience negative socialization and peer pressure. Much of the research in this area highlights the fact that home educators do not usually act in isolation. They work together through networks and organizations. By sharing teaching materials and ideas, taking their children on group field trips, and engaging in other social activities, home schooling parents and their children build a community. Some note that the children also benefit from the age diversity of their social contacts—they are not segregated in age-based classrooms.

A multitude of studies concerning the student achievement of home-educated children have been conducted. More than 25 different studies indicate that these students score above national averages. Only two studies have demonstrated otherwise. Although home schooled students consistently score higher on various student achievement measures, the specific determinants of their achievement are less well known. Parental demographic factors have had inconsistent effects across these studies. Of all the areas of research, the long-term effects are the least studied. The available evidence does indicate that home-educated children have high college completion rates and go on to lead successful careers and lives.

The social scientific study of this growing movement is certain to continue. The existing literature illustrates that the least is known about the long-term effects, so this area should be a priority for researchers. Although home schooling has been a very polarizing issue, this is changing as it continues to become more popular and more publicly acceptable. The methodological problems of identifying and studying this population are likely to diminish in the future, providing the grounds for additional rigorous analysis. As a whole, the existing research indicates that those who are home schooled match or exceed their public school counterparts in terms of socialization, academic performance, and success in later life. Despite its many critics, there is no consistent or major evidence in the social scientific literature suggesting that home schooling is in any way detrimental to those involved or to society as a whole.

**SEE ALSO** Volume 1: *Parental Involvement in Education; Religion and Spirituality, Childhood and Adolescence.*

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**Ed Collom**

# HOMELESS, YOUTH AND ADOLESCENTS

Estimating the number of runaway and homeless youths in the United States is challenging because homelessness is not a steady state, particularly for adolescents. Even if returning home is not an alternative, minors have the options of temporary shelters, foster care, group homes,

or other institutional living arrangements. Most chronic runaways and homeless adolescents live a "revolving door" existence, alternating between various housed living arrangements punctuated by time directly on the streets. The amount of time unsupervised and unsheltered may vary from episodes of a single night to several months. Definitions of homelessness for adolescents have distinguished between *runaways* and *thrownaways*.

According the National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children (NISMART), a "runaway episode" is defined by meeting one of the following three criteria: (a) a child leaves home without permission and stays away overnight; (b) a child 14 years old or younger who is away from home chooses not to come home when expected to and stays away overnight; (c) A child 15-years old or older who is away from home chooses not to come home and stays away two nights. A "thrownaway episode" is defined by either of the following two criteria: (a) a child is asked or told to leave home by a parent or other household adult, no adequate alternative care is arranged for the child by a household adult, and the child is out of the household overnight; (b) a child who is away from home is prevented from returning home by a parent or other household adult, no adequate alternative care is arranged for the child by a household adult, and the child is out of the household overnight (Hammer et al. 2002, p. 2).

Usually the term "chronic runaways" refers to those who have run away three or more times. "Homeless youth" refers to those 18 years or older who cannot return home, who have chosen to never return home, and who have no permanent residence (GAO, 1989). Here we focus on chronic runaways and homeless adolescents.

Estimates based on data from the three components of the Second National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children (NISMART-2)—the National Household Survey of Adult Caretakers, the National Household Survey of Youth, and Juvenile Facilities Study annual reporting period of 1999—indicate that 1.68 million youth had experienced a runaway/thrownaway episode. Youths aged 15 to 17 years accounted for two-thirds (1.15 million) of the runaway/thrownaway episodes. Only 4% were under 11 years (Hammer et al. 2002, p. 6). Nineteen percent of the episodes were less than 24 hours, 58% percent of the episodes 24 hours to less than one week, and 22% were more than one week. About equal numbers of boys and girls run away (Hammer et al. 2002).

Historically, Americans have had a tendency to romanticize runaway adolescents. They were the Huckleberry Finns, the cowboys, the hobos of the Great Depression, and even the hippies of the 1960s who left home by choice seeking their fortune, adventure, rebelling against society, or "dropping out" altogether. Much of the research on runaways from the 1950s, 1960s, and early 1970s at least partially reflects this view. This early research argued there were two types of runaways: those running to something and those running from something. Other typologies of the period also included adventure seekers. By the late 1970s and early 1980s, with the advent of more systematic empirical research, the emphasis on adventure and fortune-seeking largely disappears.

Subsequent research has shown convincingly that the vast majority of chronic runaways and homeless youth are running from or drifting out of disorganized and troubled family situations. Numerous studies have documented problems in the caretaker–child relationship ranging from control group studies of bonding, attachment, and parental care to combined caretaker and runaway child reports on negative parenting behaviors and mutual violence. Studies based on adolescent self-reports have indicated high levels of caretaker physical and sexual abuse among chronic runaways and homeless youth.

There is a growing literature on sexual minorities among homeless and runaway adolescents; however, the estimates vary extensively by type of sample. Widely cited estimates reported by Kruks (1991) of 25% to 40% were based on reports from street outreach agencies in Los Angeles. Numbers from larger, more systematic studies are lower and vary by region. For example, a Hollywood study reported 18% of the youths interviewed self-identified as gay or bisexual (Unger, Kipke, Simon, Montgomery, et al, 1997); a Seattle study reported 22% self-identified bisexual, gay, lesbian or transgender youths (Cochran, Stewart, Ginzler, & Cauce, 2002); and a four-state longitudinal study in the Midwest reported 15% self-identified bisexual, gay, or lesbian adolescents (Whitbeck, Chen, Hoyt, Tyler, et al, 2004). Sexual minority runaways tend to be especially at risk. They are more likely to be "thrownaways," more highly victimized, to engage in survival sex (males), and have higher rates of psychopathology.

Youths' troubled backgrounds affect behaviors and experiences on the street. At the point a runaway first leaves home, he or she is already in acute distress. Experiences on the street may either amplify existing behavioral problems and psychological symptoms or result in new symptoms. For runaway and homeless adolescents the street environment is essentially a combat zone. Rates of physical and sexual assaults are extremely high and, at least in the case of sexual assault, apt to be underreported. Kipke and colleagues found that more than 50% of their sample of Hollywood street kids had been beaten up on the streets, 45% had been chased, 26% had been shot at, 9% had been stabbed, and 15% had been

sexually assaulted. Their risk was such that they lived in constant fear. More than one-half feared being shot or stabbed and nearly one-half feared sexual and physical assault (Kipke, Simon, Montgomery, Unger, et al, 1997).

In a four-state Midwest sample, 19.7% reported they had been robbed, 26.8% beaten up, 31.5% threatened with a weapon, and 15.6% assaulted with a weapon. Eighteen percent of the young women had been sexually assaulted when on the streets (Whitbeck & Hoyt, 1999). In a three-year longitudinal study of runaway and homeless youth in the Midwest, 91% of the men and 85% of the women who had remained in the study had been physically victimized when on the streets by the final wave of interviews. Forty-two percent of the women who had remained in the study had been sexually assaulted by the final wave, a 40% increase over 3 years (Whitbeck, 2009).

Running away is often preceded by or accompanied with other types of serious violations of rules (e.g., staying out at night despite parental prohibitions, truancy), and other behavioral problems such as substance abuse or delinquent behaviors. These behaviors are carried onto the streets, where the need for self-protection and the lack of legitimate means for self-support increases the likelihood of engaging in deviant survival strategies (Hagen & McCarthy, 1997). Once on the streets, social networks teach survival strategies. Because runaway minors have very few legitimate means of independent economic support, they often rely on the street economy to get by. Conservative estimates of survival strategies based on a sample of runaway and homeless adolescents in large to moderate sized cities in the Midwest indicate that nearly one-half had sold drugs, 14% had panhandled, and 16% had shoplifted or stolen to get money or food (Whitbeck, 2009).

Estimates of sexual survival strategies (i.e. trading sex for money, food, drugs or a place to stay) vary widely by how questions are asked, location, and methods of sampling. Although it is likely underreported most studies indicate that relatively few adolescents engage in prostitution. In a sample of New York City street youth, Rotheram-Borus and associates reported that 13% of males and 7% of females engaged in survival sex (Rotheram-Borus, Meyer-Bahlburg, Koopman, Rosario, et al, 1992). Greene, Ennett, and Ringwalt (1999) in a national sample of sheltered youths reported 28% of "street youths" and 10% of "shelter youths" had engaged in survival sex. Only about 7% of males and 6% of females reported survival sex in a 1999 study of Midwestern homeless youth in small- to moderate-sized cities, although about one-fifth said that they had considered doing so (Whitbeck & Hoyt, 1999).

Nearly all runaways are sexually experienced and along with high rates of sexual activity comes risk for sexually transmitted infections (STI). Studies show self-reported rates of STIs ranging from 20% to 37% (Noell, Rohde, Ochs, Yovanoff, et al, 2001). There is some evidence that rates of STIs vary by sexual orientation, though this is likely a function of survival sex and number of sexual partners.

HIV-risk among runaway and homeless youths has been a serious concern since the late 1980s. Homeless youths are subject to multiple risks for HIV infection including high rates of sexual activity, multiple partners, survival sex, and exposure to IV drug users (Solario, Milburn, Rotheram-Borus, Higgins, et al, 2006). Estimates of HIV infection among this population vary widely by site and sample. The 1990 Office of the Inspector General reported prevalence rates of 3% to 31.5% depending on the shelter where the testing was done (U.S. Office of Inspector General, 1990). Stricof and colleagues (Stricof, Kennedy, Nattell, Weisfuse, & Novick, 1991) reported an infection rate of 5.3% among a sample of New York City homeless youths; Pfeifer and Oliver (1997) reported a rate of 11.5% in Hollywood, California.

Street survival strategies do not always work well and runaway adolescents often go hungry. Obtaining food regularly is precarious and it is often necessary to turn to street survival strategies to obtain it. Based on current estimates of 500,000 homeless and runaway adolescents on the streets or in shelters in the United States on a typical day approximately one-third or 165,000 homeless young people in the United States went hungry (Whitbeck, Chen, & Johnson, 2006).

The distress that builds prior to leaving home and that incurred when on the streets exact an emotional toll. Although prevalence estimates vary due to measurement and sampling, both symptom and diagnostic studies indicate high rates of externalizing and internalizing problems among runaway and homeless youth. For example, prevalence rates for conduct disorder (CD) in three samples of adolescents who could be confidently classified as "chronic runaways" or "homeless" were very similar: 54% in the Booth and Zhang study (1996), 59% in a New York City study (Feital, et al, 1992) and 53% in a Seattle area sample (Cauce, et al, 2000). Studies reporting prevalence rates for major depressive episode (MDE) indicate less agreement than those for CD, with prevalence rates ranging from 49% (Feital, et al, 1992) to 21% (Cauce, et al, 2000). Studies of substance abuse also yield varying estimates for self-reported prevalence and meeting diagnostic criteria for substance use disorders (SUD). Prevalence rates of SUDs among homeless and runaway adolescents range from 71% (Kipke, Montgomery, Simon, Unger, & Johnson, 1997) to 24% for drug abuse (Cauce, et al, 2000). The variation in prevalence rates reflects differences in age groups and sampling strategies that beleaguer research efforts with this population.

***Homeless Adolescents.*** *Research has shown that the vast majority of chronic runaways and homeless youth are running from or drifting out of disorganized and troubled family situations.* © TONY ARRUZA/CORBIS.

A 2004 diagnostic study indicates that 21.3% of Midwestern runaway adolescents aged 16 to 19 years (mean age was 17.4 years, with standard deviation of 1.05) met diagnostic criteria for SUD, CD, MDE, or posttraumatic stress disorder (PTSD), and 66.3% met criteria for two or more of these disorders (Whitbeck, Johnson, Hoyt, & Cauce, 2004). Runaways were six times more likely to meet criteria for lifetime comorbid mental disorders than were similarly aged young people in the National Comorbidity Survey (67.3% vs. 10.3%). The most prevalent lifetime disorder was CD (75.7%) followed by alcohol abuse (43.7%), drug abuse (40.4%), PTSD (35.5%), and MDE (30.4%) (Whitbeck, et al, 2004).

It should be apparent from this review that chronic running away and periods of adolescent homelessness have serious life course consequences by interrupting or otherwise modifying the timing, context, and completion of fundamental developmental tasks and important life transitions. Ideally, adolescence is a time for learning and rehearsing adult roles characterized by forays into independence with retreats to home and dependency. For homeless youth, the transition to adult behaviors tends to be more abrupt and off time. Running away, with concomitant academic disruptions, loss of conventional adult mentors and conventional peer affiliations, early alcohol and drug use, and participation in the street economy interrupts learning of conventional behaviors essential for successful adulthood. Important pro-social developmental pathways have been missed or at minimum delayed, and there is little on the streets to replace them.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Child Abuse; Drinking, Adolescent; Drug Use, Adolescent; Foster Care; Gays and Lesbians, Youth and Adolescence; Health Behaviors, Childhood and Adolescence; Poverty, Childhood and Adolescence; Sexual Activity, Adolescent;* Volume 2: *Homeless, Adults.*

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***Les B. Whitbeck***

# HUMAN CAPITAL

Education and training are important determinants of life course outcomes. Across individuals, no variable better predicts lifetime earnings and mental and physical well-being than the number of years of schooling completed. Conceived by economists as *human capital investment* (Becker, 1964; Hanushek & Welch, 2006), the study of the determinants and consequences of variation in years of schooling and training completed has emerged as one of the dominant paradigms in social scientific research. Sociologists have made their own contribution to economists' ideas, adding *social capital* (resources available via social networks and group membership) and *cultural capital* (skills and habits available via family socialization and group culture) to the list of investment goods yielding a later life return (Coleman, 1988; Farkas, 1996, 2003; Portes, 2000). In concert with the individual's genetic and wealth inheritance, achieved human, social, and cultural capital strongly affect life course attainment of occupational standing, earnings, and wealth, as well as correlated outcomes such as health and well-being.

## HUMAN, SOCIAL, AND CULTURAL CAPITAL

The *human capital* investment paradigm has proven particularly durable for the study of education and training

as assets useful in production. Economists have expanded their discussion to include noncognitive skills and habits as well as cognitive skills, and the effects of intervention programs and schools on student values, habits, and behaviors as well as academic skills (Duncan & Dunifon, 1998; Heckman & Lochner, 2000). Even economists, however, seem to realize that the notion of a carefully calibrated cost–benefit calculation regarding how much to invest in one's children's education does not explain why low-income families are generally unable to help their children achieve school success.

This is better explained by the second research literature, concerned with *cultural capital*. In this perspective, Swidler (1986) sees individuals as using strategies that build on their culturally shaped skills and habits to organize their life. Low-income parents sometimes fail to help their children succeed at school not because they see too low a payoff to such action, but because they lack the skills, habits, and knowledge needed to do so. Lacking these skills and habits themselves, they are unable to help their children obtain them.

These skills and habits include the usual academic skills of language (including vocabulary and grammar), reading and mathematics, and the teacher-demanded work habits of homework, class participation, effort, organization, appearance and dress, and lack of disruptiveness (Farkas, 1996, 2003). They may also include participation in elite cultural activities such as ballet and piano lessons, although parental assistance with more mundane skills (e.g., reading) is more consequential for student success. Of course, the parents' own cultural capital (school-related skills and habits) is central to the provision of such parental assistance.

Finally, a third research tradition follows the cultural capital tradition by emphasizing the resources parents use to assist their children toward school success but focuses on *social capital*—resources stemming from parental and neighborhood social networks (Coleman, 1988; Portes, 2000). Central to these is the concept of community closure—parents' relationships with other adults in the neighborhood. "Intact families double the supervisory and supportive capacity of parents, while closure expands these capacities further by involving other adults in the rearing and supervision of children" (Portes, 2000, p. 6).

These three perspectives contain a common core—the application of resources to child rearing, that is, to building skills and habits in children. These resources are primarily provided by the child's parents but may also be provided by extended family members, neighborhood adults, and adults paid with public funds. Assistance from the latter two groups, however, must typically be gained by parental or family actions. Thus, all three theoretical perspectives—human, cultural, and social capital—combine to constitute what may be referred to as *family resource theory*. Children raised in families with high levels of human, cultural, and social capital resources tend to develop high levels of these resources themselves. It is variation in these resources that create the mechanisms leading to inequality in life course outcomes.

## HUMAN CAPITAL AND LIFE COURSE INEQUALITY

The most obvious mechanism of human capital's effect is that those who complete more schooling use it to attain occupational employment with better pay and working conditions than would otherwise be available to them. Because better paying occupations typically also provide better fringe benefits, including health insurance and retirement benefits, as well as lower unemployment rates, the advantages of increased position within the occupational structure accumulate rapidly, leading to very substantial differences in full earnings (all compensation included) over the life cycle.

This effect of schooling on earnings is central to the human capital paradigm—workers who go further in school are thereby investing in skills that increase their productivity, and their increased life course earnings represent a fair market return on this investment. But the effects of schooling on later-life inequality potentially encompass more than the simple fact that increased years of schooling increase work productivity and, therefore, pay. Rather, greater education is also associated with increased social and cultural capital, and these affect not only pay but also the individual's social-psychological resources, health lifestyle, physical functioning, and perceived health and happiness.

Perhaps the key social-psychological resource is the sense of personal control. This has been operationalized as internal locus of control (Rotter, 1966), mastery (Pearlin, Lieberman, Menaghan, & Mullan, 1981), instrumentalism (Wheaton, 1980), self-efficacy (Gecas, 1989), and personal autonomy (Seeman & Seeman, 1983). Individuals scoring high on this dimension believe that they can achieve their goals through their own efforts. By contrast, lack of control or powerlessness is the belief that one is relatively helpless against powerful external forces. Not surprisingly, the sense of personal control is correlated with other measures of well-being. A sense of personal control is positively associated with lifestyle behaviors that improve health and prevents the suppression of the immune system that is associated with personal demoralization. It is also positively related to the individual having a strong network of social support. Higher schooling attainment pushes all of these variables upward.

The effects of human, social, and cultural capital are intertwined as they increase schooling, employment, earnings, perceived personal control, health-related behaviors, and social support networks. Positive feedback loops are common. Over the life course, the likely effect is that (as has been shown for early reading skill [Stanovich, 1986] and progress though the educational system [Kerckhoff & Glennie, 1999]), "the rich get richer," where wealth is measured not just monetarily but also includes both physical and psychological health (and, therefore, happiness). This notion of cumulative advantage has become a major paradigm in the study of life course outcomes (O'Rand, 1996; Ross & Wu, 1996), one that has been explicitly linked to feedback loops in human, social, and cultural capital (O'Rand, 2001).

The mechanisms underlying cumulative advantage are straightforward. During K–12 schooling, families with greater human, social, and cultural capital resources (such as two parents as opposed to one; higher parental education, occupation, and earnings; greater parenting focus and skill; better psychological and physical health; more extensive social networks; and a more positive neighborhood environment) translate these advantages to their children by instilling skills and habits that help the child have positive engagement and success with school and peers. The efforts and activities these parents and their children engage in lead to the children's development of positive skills and habits, and the success of these efforts leads to positive outcomes and a sense of personal control for the children. These in turn encourage further effort and optimism: High goals are set for the future because present goals have been met, and the experience has been pleasant and rewarding.

Children who have been provided with these advantages are disproportionately likely to enroll in, and complete, college. Many go further, receiving training and a degree in business, law, medicine, engineering, education, or other professional field. At each stage, human, social, and cultural capital increase further. Skills and habits of social interaction and productive work are learned and practiced. Network connections are expanded. The sense of personal control increases. New horizons become visible, and goals are adjusted upward. Completing more schooling affects these outcomes positively because the individual has a greater stock of productive skills. Positive effects may also flow from credentialing and from the selectivity (prestige) of the schools attended (Ross & Mirowsky, 1999).

The process continues through the period of working life and the employment career. Better educated workers pursue careers in a national labor market. They choose spouses from a larger pool of individuals, with career experiences and personal strengths similar to their own. They are geographically mobile and build social networks across multiple geographic locations. They travel more, both for business and pleasure, and adopt a cosmopolitan outlook. Once again, multiple feedback loops are in operation. Education increases earnings and economic security. The sense of personal control is strengthened. A healthy lifestyle is more likely to be adopted. (This includes a greater emphasis on exercise and the avoidance of obesity and a lower likelihood of excessive drinking and smoking.) Social support networks are denser and more extensive, as well as more likely to overlap both professional and personal lives.

Higher levels and more effective use of these economic, psychological, and social assets are characteristic of better educated workers as they progress through the life course (Mirowsky & Ross, 1999). This results in a higher standard of living, less psychological distress, a greater sense of personal control, and greater happiness.

## THE ROLE OF INSTITUTIONAL ARRANGEMENTS

Thus far the description of life course behavior and outcomes has focused primarily on individuals, their families, and their social networks. Yet individual-level outcomes are crucially determined by the incentive and reward structures within which these individuals operate. This *social/economic structure* is embodied in the institutional arrangements of society in general and of individual firms in particular.

Central to these arrangements is the system of privately financed retirement and health insurance fringe benefits, provided by employers largely to mid- to upper-level, as well as to unionized lower-level, employees. In many cases, long-term employment with the same firm resembles an implicit contract, in which workers are paid less than their actual productivity when they are young and more than their actual productivity when they are old (England & Farkas, 1986). Lower wages when workers are young help compensate the firm for the cost of training, and they provide an incentive for those workers with long time horizons and the greatest amount of firm-specific human capital to be loyal over the long run. This "back-loaded" compensation scheme includes health and retirement fringe benefits that become most valuable later in life. In concert with monetary wages that rise faster than productivity in later life, this scheme shows strong patterns of cumulative advantage for the better educated and most highly placed employees.

Other forces driving cumulative advantage include the historic increase in economic opportunity for women and the associated rise in rates of divorce. One result has been greater diversity in household types. With continued strong patterns of assortative mating by educational

level, combined with decreased marriage and increased nonmarital childbearing among the least well-educated, particularly inner-city African Americans, total household incomes at the top and bottom of the social class hierarchy are diverging ever more widely.

Also important has been the long-term decline in unionization, as employment has shifted out of manufacturing and into the service sector. The resulting decline in "blue-collar elite" jobs in unionized manufacturing such as autos and steel has been exacerbated by globalization and foreign competition. Added to this has been the increased computerization of the economy. A consequence has been a dramatic increase in the wage premium paid to college graduates and stagnant or declining real (adjusted for inflation) wages for jobs requiring lesser skills (Bernhardt, Morris, Handcock, & Scott, 2001). These technological changes, and their effects on institutional arrangements, have also acted to increase life course patterns of cumulative advantage and disadvantage in employment and household life.

## HUMAN CAPITAL AND THE LIFE COURSE

Years of schooling attained is *the* key stratifying variable determining life course outcomes. Given the positive correlation between parents' educational attainment and that of their offspring, the process of cumulative advantage/disadvantage begins at birth. Where income and wealth are concerned, this process operates particularly strongly toward the high end of the occupational distribution, with individuals in high-paying occupations accumulating wealth quite rapidly as they age. Where health is concerned, even high occupational standing, income, and wealth cannot prevent an eventual decline with age. Nevertheless, the best educated individuals are able to put this decline off longer, and they experience a more gradual slope of decline. This is at least as much attributable to the healthier lifestyle and greater psychological resources and sense of control as to the greater income of the better educated.

In sum, there is a pattern of human capital based cumulative disadvantage, as the physical and psychological pressures of a harder life, with fewer economic and psychological resources, take their toll on the less educated. As the economy becomes increasingly based on high technology, individual differences in human capital accumulation will continue to determine inequality at all ages, as well as cumulative inequality over the life course.

**SEE ALSO** Volume 1: *Academic Achievement; Cognitive Ability; Coleman, James; College Enrollment; Cultural Capital; Social Capital.*

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***George Farkas***

## HUMAN DEVELOPMENT

SEE Volume 1: *Bronfenbrenner, Urie; Elder, Glen H., Jr.; Erikson, Erik; Piaget, Jean.*

## HUMAN ECOLOGY

SEE Volume 1: *Bronfenbrenner, Urie.*

# I

## IDENTITY DEVELOPMENT

*Identity* is a term often employed in the social sciences, typically referring to some individual-level attribute that a researcher seeks to explore. As such, it runs the risk of being defined so generally as to be analytically useless. The relevant definitions of identity are summarized in two domains: *ego* and *social* approaches to identity. Ego identity is traditionally associated with classic psychological scholars, namely Jean Piaget (1896–1980) and Erik Erikson (1902–1994), and represents an integration of the self as a unitary construct that typically is largely developed by adolescence. This is often what is referred to in the colloquial idea of "finding yourself." In contrast, the social identity approach is a broad umbrella term encompassing more recent sociological and psychological orientations linking the individual to socially meaningful groups and societal positions. In this perspective, everyone has a set of identities ranging from one's gender, religion, occupation, and so on. Social identities situate an individual in relation to others in situations and can develop differentially across the life course.

### EGO IDENTITY

In developmental literature, identity is a concept employed to capture the sense of coherence and unity in the self across life experiences and is most commonly associated with Erikson (1963); he wrote that a "sense of identity provides the ability to experience one's self as something that has continuity and sameness and to act accordingly" (p. 42). Erikson's work focused on the stages of individual development that people encounter as they develop understandings of themselves in relation to others. Current scholarship builds on Erikson's psychosocial model of a single pattern of stages by focusing on the place of narrative (i.e., the story of oneself) in building a sense of identity, as well as the importance of historical and social contexts on this process. Within this tradition, there is a tension between analytical models of identity imposing academic definitions on individual experience and allowing an individual's notions of identity to be voiced and validated. Some, both professionals and laypeople, view identity as static across the life span, whereas others see it as contingent and shifting based on situational circumstances. Current models attempt, with differential success, to simultaneously capture different multidimensional levels to conceptualize and measure identity.

### SOCIAL IDENTITY

In the more sociologically oriented life-course literature, identity refers to the various meanings an individual attaches to oneself and by others within social relationships. Two theories organize the relationship of identities to the social world: the more sociological identity theory and the more psychologically oriented social identity theory. Identity theory has traditionally focused on the self as a set of internalized social roles and how identities are primarily (but not exclusively) linked to hierarchically organized roles (such as employee, sister, and volunteer) that an individual prioritizes. Social identity theorists study how individuals conceptualize group boundaries. Specifically, identities focus on the commonalities among people who share a group membership (ethnicity, gender, and club membership) and the differences between that group and other related groups. Recent research in each

tradition moves beyond this simple dichotomy to focus on how membership in roles and groups combine to produce an organized sense of self.

Identities are meanings that guide behavior and organize a personal sense of self. They frame perception within situations and offer intuitive guidelines for how well one fits the expectations they (and others) have for themselves in a particular social encounter. They also circumscribe social allegiances. The self is made up of one's conglomeration of identities. Over time, the expectations associated with each identity become internalized and become part of one's expectations for guiding and interpreting behavior. More recently, identity and social identity theorists have incorporated a social notion of the personal identity that might usefully be compared to the ego identity notion found in developmental work. Typically, however, these models are studied in isolation.

## IDENTITY DEVELOPMENT

Both ego identity and other important social identities form early in a person's development. When discussing the development of a person, however, one must be careful to differentiate between the child and childhood. The former focuses on the human organism and the latter on a set of cultural ideas. Identity scholars typically focus on childhood, but any discussion should be bracketed by an understanding of the historically contingent ideals, norms, and ideologies that influence individual development.

There are multiple theoretical perspectives on identity development within the ego identity tradition. Cognitive theory is particularly influential, largely pioneered by Piaget, who argued that children develop schemas, or classification and categorical systems for interpreting the social world. Young children understand themselves as discrete entities, separate from their primary caregiver, and possess simplistic schemas (e.g., viewing oneself simply as a girl or boy). As cognitive abilities develop and the child engages in more social experience, schemas become more complex and integrated. Children are able to build a more substantively complex self-understanding rather than simply thinking of themselves in terms of discrete entities. Children understand that they can view themselves as student, friend, and soccer player simultaneously, and that others inhabit multiple identities as well. Children also learn how and when to evaluate aspects of themselves, forming judgments about what is good and bad. These evaluations become more sophisticated and nuanced as children become adolescents. Lev Vygotsky (1978) extended the cognitive approach into the interactional realm, focusing on the child as an independent problem solver within parental and peer interactions. This focus on the agency of the child as an active shaper of his or her socialization is gaining currency in current social science approaches.

Symbolic interactionist approaches bridge more psychologically oriented approaches to identity development with more sociological notions. George Herbert Mead (1863–1931) discussed children's development of a sense of themselves through the process of taking the role of significant others and developing what he termed *reflected appraisals*, whereby the children imagines how others evaluate their behavior. Roles are expectations for behavior attached to social positions such as mother, sister, and student. Role-taking involves the conscious process of anticipating the responses of actors in the situation and directing one's behavior accordingly. Developmentally, role-taking begins early when a young child begins to imitate the behaviors of his or her primary caregiver. Through imitating significant others, a child learns to act out one role one at a time. For example, a child playing with a baby doll displays mirrored behaviors such as holding, rocking, and patting the doll and slowly learns to adopt the perspective of a caregiver.

The developing child learns to take on multiple roles simultaneously, understanding that the same person might possess a variety of roles with potentially irreconcilable expectations. As part of this process, Mead focused on the way the child abstracts a sense of a *generalized other*, a representation of the perceived attitudes of the larger community. Developing a conventional sense of the generalized other is tantamount to learning the culture the child was born into. Developing a stable sense of self-identity involves properly understanding the wider community the child inhabits. At the root of this development is the idea of reflexivity, a self-evaluative process that children use to imagine how their behaviors are perceived and to form standards through which they gauge if they are enacting roles properly.

***Bar Mitzvah Ceremony.*** *By adolescence, individuals situate their identities along a variety of dimensions, including multifaceted understandings of cultural meanings of race, ethnicity, religion, and gender.* © ROBERT MULDER/GODONG/ CORBIS.

As children advance cognitively, they understand that different situations may call for different role expectations. These differential sets of expectations become internalized as identities, and the imagined evaluation of others leads to self-evaluation that consciously and nonconsciously guides behavior within a situation. By adolescence, individuals situate their identities along a variety of dimensions, including multifaceted understandings of cultural meanings of race, ethnicity, religion, and gender. Symbolic material for constructing these various identities also comes from a larger variety of sources than early childhood, including media, schools, and peer culture. One orienting principle for researchers involves the extent that they weigh internal processes (e.g., personality dispositions and maternal attachment) versus environmental influences (e.g., school structure and the occupational stratification system) in shaping the development of identity as a child ages and transitions into adulthood.

These more individually oriented perspectives on identity development can be subsumed under the life-course perspective, a larger framework focused on the interplay of individual lives within a broader sociological and historical context. As identity theory highlights, an individual's life involves overlapping trajectories in a variety of domains, from occupation to family life, that set out expected sequences of identities. People develop socially and biologically over time within socially specified, normative trajectories. People who have a child as a teenager or who marry for the first time in their 40s, for example, are experiencing these events at periods in their life that are not in step with normative cultural expectations. Embedded within these trajectories are sets of typical transitions, such as leaving high school, that orient people's lives.

Part of the individual-level maintenance of a trajectory involves the internalization of the appropriate identity that reflects and guides an individual's behavior in the appropriate situations. Transitions, or turning points, signify a reconstruction of an identity, such as *college graduate*, or the adoption of a new identity, such as *parent*. A key point of this perspective is that historical events channel and shape the possible identities an individual might develop, even as there is a concurrent focus on the importance of individual agency to shape his or her own life course within societal bounds. For example, scholarship surmises that the culturally sanctioned stage of adolescence may be extending in the United States. Jeffrey Arnett (2000) suggested a normative life stage termed *emerging adulthood*, whereby people in their late teens and early 20s do not believe they have reached adulthood but also no longer see themselves as adolescents.

## IDENTITY RESEARCH AND MEASUREMENT

The varying concepts of identity have led to challenges translating theoretical approaches about identity into empirical practice. One needs to differentiate between the study of different life-course stages (e.g., childhood and adulthood) and the study of identity development across the life course. An entire branch of psychology is focused on the study of childhood development, largely based on systematic observation, as very young children are not particularly facile with surveys. As children age, psychologists shift focus to cognitive development, often employing laboratory experiments. Much of this work is focused on the evaluative aspects of the self and what a person illustrates when focusing on mental health outcomes. For example, self-esteem, evaluative feelings about the self, has received a particularly large amount of attention. Young children at, for example, 8 years old will typically report relatively high self-esteem, but as they enter adolescence their self-esteem often dips to the lowest levels of their lifetimes. Self-esteem often rebounds as a person enters adulthood, and stays rather stable until older age when the individual's self-esteem is more likely to decrease. Such processes are affected by an individual's location in social structure.

Notable empirical treatments of identity in the Eriksonian tradition include the identity status paradigm (Marcia, 1966), which focuses on identity statutes based on differential dimensions of exploration and commitment, and Michael Berzonsky's (1989) derivation focused on how people confront issues of identity. Other perspectives draw on the coherency element of Erikson's work, such as James Côté's (1997) attempt to develop a multidimensional measure based on established scales measuring self-esteem, locus of control, and purpose in life. In particular, the extended transition to adulthood is gaining currency as a topic of interest among identity scholars. Erikson posited a developmental stage in which the young are able to explore potential identities without having to make permanent commitments. Given the current historical period of an extended transition time, a focus on individual agency in the development of identity formation is prevalent.

Social psychological approaches to identity bridge the psychological focus on direct observation—often in the experimental setting—and the more sociologically oriented focus on large-scale analyses, which often relies on survey data. For example, Alison Bianchi and Donna Lancianese (2005) used nationally representative longitudinal survey data of kindergartners to find that children's developing student identity is affected by their positions in societal stratification systems such as family wealth and personal beauty. In contrast, researchers studying social

identities based on group membership typically rely on experimental settings. Others, focused on the range of identities developed and enacted in a human life, can rely on instruments ranging from computer surveys to daily diary studies. Scholars focused on narrative constructions of identity can employ in-depth interviews or content analyses, whereas those focused on identity performance can draw on participant observation.

Sociological identity researchers typically focus on adults as their unit of analysis, often studying identity transitions (e.g., from student to worker), including negotiating the transition out of a role identity (e.g., retirement). Identity researchers study how people manage multiple identities at the same time (i.e., being a spouse, parent, and worker). Again, a focus on mental health outcomes is a common area for research in this approach. Sociological study of children is rare and typically involves observation of naturally occurring groups of children. Although the typical focus has been on how society shapes the individual, the more recent trend has been to simultaneously focus on how children are active shapers of their own socialization—a capacity that extends across the life course.

## FUTURE DIRECTIONS

The term *identity* has great potential utility for developmental and life-course researchers, although it is often used haphazardly and without theoretical precision. In many cases, people use the term *identity* as a placeholder for other social processes, such as self-understanding, identification, categorization, commonality, or a feeling of group belonging. Scholars appeal to different traditions and presuppositions when speaking of ego identity, social identity, role identity, ethnic identity, gender identity, and so on. All of these approaches share a necessary focus on the social, interrelated nature of individuals, which is important for conceptualizing the developing person across the life course. Future work should both specify the particular use of the term as well as build linkages across literatures to best advance understanding of the mechanics and importance of individual self-conceptions across time and situation.

The notion of identity is useful for developing a proper conception of social actors and points to fundamental ways humans understand themselves, understand others, and align with meaningful social groups and categories. A plausible thesis involves the increasing importance of identity within highly differentiated, varied social systems, whereby individuals are increasingly likely to encounter distinct situations calling forth different aspects of self. To the extent that multiple potential interaction partners recognize different aspects of a person, identity in both of its academic uses—as a unifying ego and as representing internalized meanings represented by a series of social locations and categories—becomes even more important than in the less differentiated past. To interact with others, a standpoint is needed through which to understand oneself, others, and the situation. Identity serves that purpose, both within situations and as a coherent self-understanding develops across the life course. Current research attempts to bridge these two approaches to identify and disentangle this apparent paradox, to the extent that individual consistency is present or overshadowed in different situations or at different times in the life course. Facilitating well-being requires elements from both literatures: helping individuals develop a stable sense of self while also allowing for the multiple situation, influences, and life stage appropriate roles that comprise a human life.

**SEE ALSO** Volume 1: *Activity Participation, Childhood and Adolescence; Erikson, Erik; Media Effects; Piaget, Jean; Self-Esteem; Social Development; Socialization; Socialization, Gender; Socialization, Race;* Volume 3: *Self*

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# ILLNESS AND DISEASE, CHILDHOOD AND ADOLESCENCE

Sufferers of sickness face difficulties, and children are no exception. For ill children, the ordeals and challenges can be especially complex. The impact of pediatric conditions is far-reaching, because not only individual children but also their families are affected. Another complexity lies in the disjuncture between how children and families experience *illness*, and how biomedical professionals conceive of a condition as a predominantly physical *disease* (Kleinman, 1988). The disease construct used in biomedicine is not a template for understanding illness as a felt, life-embedded experience. In contrast to biomedical disease, illness entails the social context of the ordeal (including the patient's and family's experiences) and the ways in which young sufferers live with, understand, and respond to sickness. Childhood pediatric conditions can be approached in both ways: as biomedical diseases to be tracked (and treated) clinically, but also as instances of illness that families and children experience within everyday human exchange.

## TRACKING CHILDHOOD DISEASE

U.S. trends since the beginning of the 20th century reveal dramatic changes in childhood sickness. The long-troubling infectious diseases such as measles, smallpox, poliomyelitis (polio), scarlet fever, tuberculosis, and cholera have receded. Concurrently, leading causes of child death and hospitalization have shifted from infectious to chronic conditions, which now affect 15% of American children (Wise, 2004). Asthma prevalence in those up to age 17, attributable to many factors including indoor and outdoor pollution, rose by an average of 4.3% per year from 1980 to 1996 (Akinbami and Schoendorf, 2002). Whereas 5 million American children suffer from asthma, only 8,000 children have cancer—mainly leukemia and brain malignancies. Death rates from childhood cancer have plummeted. Overall, the majority (55%) of children under age 17 hospitalized in the United States in 2000 were admitted for some sort of chronic condition—double the proportion seen in 1962 (Wise, 2004). Figure 1 shows one ranking of the diagnoses of hospitalized children.

| Condition | Percent |
|---|---|
| Asthma | 43% |
| Dehydration/gastroenteritis | 16% |
| Pneumonia | 11% |
| Seizure disorder | 8% |
| Skin infection | 8% |
| Urinary tract infection/pyelonephritis | 4% |
| Failure to thrive | 3% |
| Severe ear-nose-throat infections | 2% |
| Pelvic inflammatory disease | 2% |
| Diabetes mellitus | 2% |

SOURCE: Flores, Abreu, Chaisson, and Sun 2003.

***Figure 1.*** *U.S. children admitted to urban hospitals, conditions presented.* CENGAGE LEARNING, GALE.

Children living in developing nations face grave health risks, including specific diseases often prevented or effectively treated in wealthier countries. UNICEF has estimated that 2.3 million children under age 15 are living with HIV, and many of these children die before their second birthday (UNICEF, 2007a). Although overall child mortality declined in developing countries between 1990 and 2006, children continue to die of pneumonia (the leading cause of child death worldwide), diarrhea, and complications following birth (UNICEF 2007b). Worldwide, disease is more deleterious for poor children than for more economically advantaged children. Health disparities also are prevalent in the United States, where socioeconomic gaps persist in the prevalence and severity of pediatric asthma, among other conditions. Increasingly, epidemiologists have begun to examine the connection between children's health and the physical environment. Such studies trace how changes in the built environment (e.g., lack of space for active play) might relate to disease risk factors (e.g., lessened play and obesity-linked diabetes). Asthma and its links to indoor and outdoor air pollution pose another topic of interest, as does cancer in children exposed to carcinogens.

## THE FAMILY'S ROLE IN CHILDHOOD ILLNESS

Many have suggested that families, rather than children as isolated individuals, should be the unit of assessment and intervention in childhood conditions. According to *family systems theory*, there is a reciprocal relationship between childhood illness and family functioning. A systems approach focuses on the strategies families use to adjust to stressors or strains. Strains may include financial burdens, loss of privacy, problems with service providers, personal distress, feelings of isolation, worries about the future, medical decision making, and responsibility for medication.

Families use various coping behaviors and resources to adjust to these strains and maintain balance. *Adaptability* refers to the family's capacity to change in response to external stressors. Notably, behaviors that may seem maladaptive can in fact be protective for the family when systemic functioning is taken into account. For example, families may embrace some forms of medical treatment that are consistent with maintaining a

"normal" life, while rejecting or neglecting other clinically ordained prescriptions that disrupt routines or shared meanings. Moreover, family conflict or poor parental mental health can interfere with disease management. In dealing with chronic conditions, families endure multiple cycles of crisis and adaptation, enacting change and making adjustments many times over. Family systems theorists posit that failures in family functioning overall are more likely to *result from* a childhood illness than to *cause* such illness.

Family life, as a system, reorganizes around the illness through a series of transactional mechanisms. In some cases, a family may establish increased regimentation, structuring and organizing their interactions at the expense of warmth and communication. In other instances, siblings of the ill child may develop adjustment problems (see Bluebond-Langner, 1996, for a contrasting view). Known protective factors for siblings of ill children include parental marital satisfaction, positive sibling relationships, and a cohesive family environment (Bellin and Kovacs, 2006).

Adjustments in the family system in response to chronic illness need not be negative. Myra Bluebond-Langner (1996) identified possible strategies that families of children with cystic fibrosis use to contain the intrusion of illness into everyday family life. Positive steps that mitigated stress included routinizing tasks for managing illness, reinterpreting what was considered "normal," reassessing priorities, and reconceptualizing the future. Protective measures also can be taken in families of children with asthma. Regular practices that hold symbolic meaning and contribute to shared family identity can serve a protective function for the child's health and overall family wellbeing. Cindy Dell Clark (2003) offers numerous examples of how play and ritual can knit together a family of an ill child and lend positive meaning to needed care. For example, a parent and child might play a game together that makes treatment into a fun routine, such as pretending together that a syringe used for injection is a zebra (with lines), or by enjoying how a child sings upon injection.

*Social ecological theory* further broadens the family systems approach to include other important systems—including peer networks, school, and healthcare systems—that affect the health and development of children facing illness. Within these contexts, particular risks for children with chronic illness have been pinpointed, such as more difficult peer relationships due to illness-related stigma, and poorer school performance, traced to missed school and/or cognitive impairment associated with illness or treatment, as in childhood cancer (Madan-Swain, Fredrick, & Wallander, 1999). Factors such as peer support and parental satisfaction with health providers enhance illness management and outcomes, as has been documented for diabetes (Naar-King, Podolski, Ellis, Frey, et al., 2006).

***Diabetes.*** *A fourth grade student receives a glucose test.* © KAREN KASMAUSKI/CORBIS.

## COGNITIVE DEVELOPMENTAL MODELS OF ILLNESS

One influential approach to children's illness experience has been based on developmental distinctions, presuming that there are stage-based differences in how children at each phase of development approach illness. In other words, cognitive developmental models presume that children's understandings of illness gradually mature and transform over time.

R. Bibace and M. Walsh (1980) and E. C. Perrin and P. S. Gerrity (1981) exemplify the cognitive-developmentalist approach, which draws from theory developed by the Swiss psychologist Jean Piaget (1896–1980). Using questionnaires to elicit children's understanding and beliefs about the causes of disease, treatment, and prevention, these studies found that children between the ages of 4 and 7 hold concepts of illness laden with irrational themes such as punishment or blame, magic, or even witchcraft. Moreover, among children this age, the physical spread of disease (as conceived biomedically) is poorly understood. With advancing maturity and cognitive development, children in middle childhood are better able to understand causative factors in illness. Children's understandings of AIDS and a number of other conditions likewise have been viewed as developmentally determined.

A restrictive focus on developmental stages in children's understandings of illness has become subject to debate. Greater emphasis is now placed on the role of personal experience in children's knowledge (e.g., Eiser, 1989). At the same time, researchers studying childhood

and childhood illness using qualitative methods have focused less on a developmental trajectory and more on youngsters' first-hand, present-day experience (how children themselves make sense of and approach illness in everyday contexts) (e.g., Bearison, 1991; Sourkes, 1995).

## CHILDREN'S EXPERIENCES OF ILLNESS

Theoretical and methodological advances in sociocultural studies of children have drawn attention to how children actually live with and experience illness. Bluebond-Langner's (1978) ethnography of a pediatric ward in a Midwestern hospital was a foundational investigation, designed to consider children's perspectives, thoughts, and feelings about their leukemia. She documented how these young patients came to know of their impending death, even as they concealed this awareness to protect their parents. The study highlighted the fact that children's experiences may be distinctly their own and not fully disclosed to adults. As attention to children's agency and personal meanings has gathered interest, more is being learned about how children cope with illness. Clark (2003) showed how children use fantasy, imagination, and play to constructively deal with diabetes and asthma. Such research suggests that what developmentalist theorists construe as irrational or immature understandings (fantasy) may have positive emotional and social value for making sense of and managing illness.

Additional research highlighting children's vantage points on illness and disease has reframed scholarly thinking about children's ongoing experiences and understandings. I. Clemente (2007) has shown that Catalan youth with cancer exercise subtle agency in doctor-patient communication to overcome institutionalized evasiveness and nondisclosure. In New Zealand, Helen Mavoa (1999) found that even at age 3 or 4, preschool children with asthma sometimes displayed awareness of symptom onset prior to more overt signs (cough, wheeze, and shortness of breath). Although their adult caregivers were inattentive to such leading cues, the children could describe them. Through studies attentive to children's perspectives, new vistas are opening into their active responses to illness.

Finding investigational avenues that confront children's views and social contexts has involved methodological challenges. Studies with very young children increasingly use ethnographic or other child-centered methods that are comfortable and amenable to children. The use of play, props, photography, and drawings are ways for children to show and tell about their experiences in a manner that is child-attuned. As a case in point, researchers at Children's Hospital in Boston have captured children's perspectives on chronic illness by giving chronically ill children video camcorders and asking them to record aspects of their daily lives. This approach has been valuable for teaching clinicians what it is like to live with illness and to vividly set forth youthful perspectives on illness management and coping (Buchbinder, Detzer, Welsch, Christiano, et al., 2005; Rich, Lamola, and Chalfen, 1998).

## CONCLUSIONS AND EXPECTED FUTURE DIRECTIONS

In the American pediatric context, sickness has increasingly taken the form of chronic conditions that children and families experience over time. Asthma, a prime example of the contemporary surge in chronic pediatric conditions, is not only chronic but also life-threatening (for it entails disrupted breathing). The challenges for asthma treatment, with its often intrusive remedies, are pronounced. Families are prone to overlook prescribed regimens when they conflict with established routines and practices, creating a nagging problem for biomedical treatment.

Children with chronic illnesses have more than doubled chances for developing emotional disorders, relative to other children, which raises the stakes for reaching out to children in pediatric contexts. Anxiety and depression can occur in children with chronic illnesses either as a direct result of the illness or its treatment, or as a consequence of the family's response to new challenges posed by illness management. For example, parental stressors such as worry and the burden of care-giving may negatively affect children's emotional well-being. Furthermore, the implications of emotional problems may be long-lived, since adults who had cancer in childhood incorporate that earlier experience, for better or worse, into their adult identity. Chronic illness thus challenges clinicians to better comprehend the experiences facing families and children, and to form lasting partnerships that will, over time, provide for effective management of children's symptoms and the whole family's well-being.

To relieve children's suffering, then, is a complex and socially encumbered challenge. Contemporary research trends offer some optimism for confronting these challenges. In biomedical research, the National Institutes of Health set forth policy in 1998 to increase the extent of child participation in research, a step taken to be sure that knowledge from clinical trials will be relevant to pediatric treatment. Beyond this biomedical policy, information that promises both theoretical and practical utility is accumulating on children's own experience of illness and their ways of dealing with treatment.

In an era when chronic disease weighs on the younger generation in industrialized countries, research

on children's illness holds profound implications. Treating chronic illness competently is a task that requires both families and young patients to be part of the solution. In turn, clinicians must understand children's experiences with illness in the here and now, rather than merely as a demarcated, maturational "stage." Even as the U.S. population ages, the study of childhood conditions will be pressing, because diseases (and lifestyle habits) originating in childhood can leave significant traces on illness over the life course.

**SEE ALSO** Volume 1: *Birth Weight; Bronfenbrenner, Urie; Disability, Childhood and Adolescence; Health Differentials/Disparities, Childhood and Adolescence; Health Care Use, Childhood and Adolescence; Infant and Child Mortality.*

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## IMMIGRATION, CHILDHOOD AND ADOLESCENCE

Over the coming decades, immigrant children will have a significant impact on the social, cultural, and economic future of the United States. Immigrant children have a powerful effect on U.S. population growth and its composition. As a diverse group, they bring important cultural assets, but, at the same time, they are considered a high-risk group because of their relatively low socioeconomic status, lack of English skills, and unfamiliarity with U.S. culture. Moreover, a migration event in a child's or his or her parent's life brings about changes that will alter the life course, with social and economic ramifications that will reverberate throughout the rest of the child's life, as well as those of future generations. Thus, the well-being of immigrant children and their adaptation into U.S. society are key issues of analysis for researchers from a broad range of disciplines.

This entry presents information about the demographic characteristics of immigrant children in the United States, as well as a discussion of their resources and obstacles and the main theories used to explain their adaptation to U.S. society and its institutions. The norm is followed in demographic research by using generational categories to discuss immigrant children. Immigrant children discussed in this entry are both first- and second-generation. First-generation children are foreign-

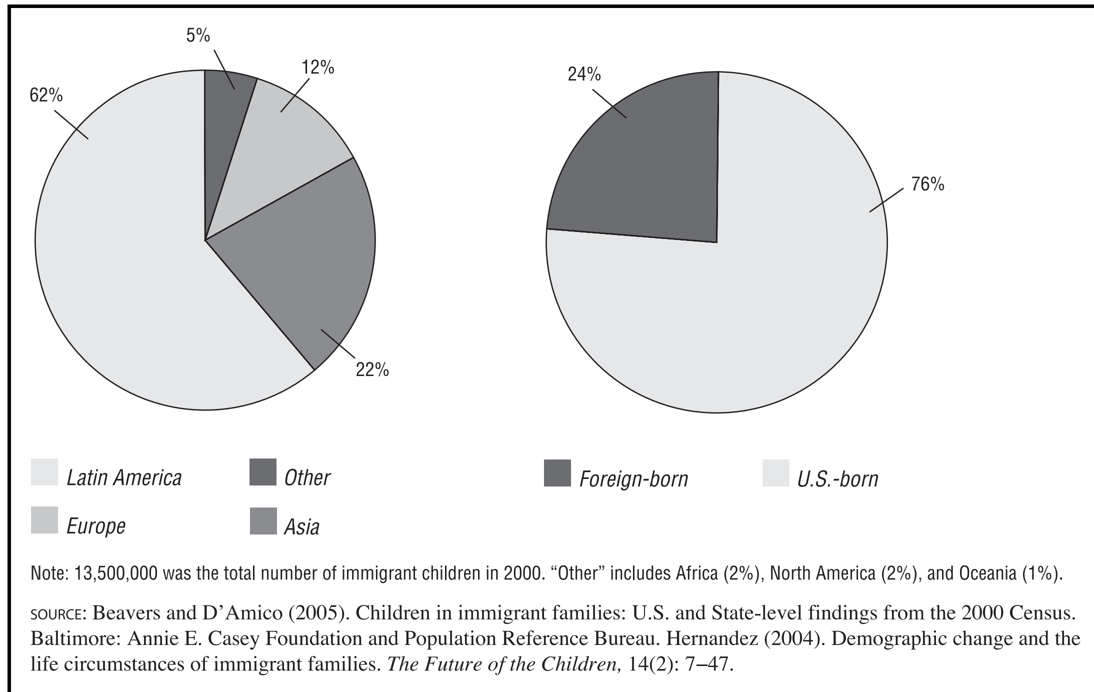


***Figure 1.*** *Percentage of immigrant children in the U.S., by region of origin and nativity.* CENGAGE LEARNING, GALE.

born and have foreign-born parents. Second-generation children are U.S.-born but have at least one foreign-born parent.

## THE DEMOGRAPHY OF IMMIGRANT CHILDREN

According to population projections, by 2050, one in five individuals in the United States will be an immigrant, compared to one in eight in 2005. Part of this trend is because of the increase in the number of migrants to the United States, but it is also because of slightly higher fertility rates among recent immigrants, especially Hispanics. According to 2005 data, the average Hispanic woman gives birth to 2.5 children over her lifetime, whereas for Whites the figure is 1.9. Consequently, immigrant children are one of the fastest growing populations in the United States. Between 1990 and 2000, the number of immigrant children increased by 63%, and, in 2000, about 15 million immigrant children accounted for 20% of the U.S. child population, with most of them (68%) living in California, Texas, New York, Florida, Illinois, and New Jersey. However, immigrant settlement patterns are rapidly becoming more dispersed throughout the United States (Beavers & D'Amico, 2005).

Immigrant children are an ethnically and culturally diverse subpopulation. Following current overall migration patterns and differentiating sharply from the immigrant children arriving in the early 1900s, who primarily came from Europe, most of immigrant children in the early 21st century arrive from Latin America and the Caribbean (62%) or Asia (22%). By far, most immigrant children have Mexican origins (39%), followed by Filipino (4%) and Chinese (3%; Beavers & D'Amico, 2005).

## IMMIGRANT CHILDREN'S RESOURCES AND OBSTACLES

Compared with children of native-born parents, immigrant children overall are more likely to experience poverty. The 2000 poverty rate for immigrant children was 21%, whereas it was 14% for children in native-born families (Hernandez, 2004). Also, in 2003, 54% of immigrant children lived in families with mean incomes at only half of the federal poverty threshold, 31% had parents with less than a high school diploma, and median household income was $44,600—which is 11% lower than the median income of native families (Capps et al., 2005). However, there are important racial and ethnic differences in the economic challenges they face. For instance, Latino immigrant children are more likely to be poor (32%) than immigrant children from Asia or Africa (15% and 19%, respectively; Lichter, Qian, & Crowley, 2007). Furthermore, the poverty rate for immigrant

children with Mexican origins is 31%, compared to 11% among Filipino immigrant children and 5% among Chinese immigrant children (Beavers & D'Amico, 2005).

In addition to economic hardship, another potential obstacle to positive immigrant adaptation is the lack of English skills. Nationally, 18% of the U.S. child population, and 72% of immigrant children, speak a language other than English at home (Hernandez, 2004). Moreover, in 2000 about 25% of children in immigrant families lived in households where no one age 14 or older spoke English only or spoke English very well. Although prior studies suggest that most children of immigrants report they prefer to use English, retention of a native language varies by country of origin (Portes & Hao, 1998). Children from Latino backgrounds, especially Mexicans, appear most likely to maintain foreign language proficiency, presumably because Latino children all share a common linguistic background and thus have more social opportunities to use their native language.

Concerning family structure, immigrant children are more likely to live in two-parent families (78%) than children of native-born parents (65%; Beavers & D'Amico, 2005). Moreover, immigrant children are more likely to live in a multigenerational household that may include grandparents. About 27% of children in immigrant families live with a grandparent or have another relative present, whereas about 8% of nonimmigrant children live with grandparents and 12% with other relatives (Hernandez, 2004). Living in two-parent families may facilitate access to resources, and, therefore, these children's parents may provide greater amounts of time and attention.

At the same time, immigrant parents are reportedly more optimistic about the future, have higher educational expectations for their children than native parents, and provide positive home environments. Immigrant parents and children maintain healthy communication, and parents act as successful role models for their children, promoting strong family values and respect for authority figures (Pong, Hao, & Gardner, 2005).

Further, immigrant parents tend to cultivate strong ethnic communities and useful social networks, participating in ethnic organizations that encourage positive outcomes among their children. Being part of a strong ethnic community yields possibilities for valuable information about jobs and educational opportunities, helpful social contacts, or financial support (Zhou & Bankston, 1994). Cohesive ethnic communities facilitate social control among adolescents, affirm cultural values, and may provide exposure to positive role models. Strong family and community ties are protective factors that can counterbalance the economic disadvantage immigrant children experience.

## IMMIGRANT CHILDREN'S OUTCOMES

Given the concerns about the impact of immigration on the growth and composition of the U.S. population, sociologists have focused many of their studies on the assimilation experiences of immigrant children. Based on the assimilation patterns observed among European immigrants in the early 1900s and because of the notion of U.S. society as a melting pot, it was expected that immigrant adults would quickly experience the benefits of the U.S. society's opportunity structure, and thus their children would mature to become nearly indistinguishable from the mainstream U.S. population.

However, empirical research during the 1990s yielded mixed results and some paradoxical conclusions. In particular, although immigrant families face financial challenges, their children often have better health status and higher educational achievement than their native-born counterparts. Yet some research has found troubling negative outcomes among immigrant youth, showing lower rates of secondary and postsecondary educational completion and declining health status over time.

## THE HEALTH STATUS OF IMMIGRANT CHILDREN

Research has shown that immigrant children are less likely to have health insurance or a primary care physician than children of U.S.-born parents. In 2004, 20% of immigrant children between the ages of 6 and 17 were uninsured, compared to 8% of children of native-born parents. At the same time, children of immigrants were less likely than children of native-born parents to be covered under employer-based insurance in 2002 (22% and 31%, respectively; Capps et al., 2004).

Although insurance coverage is less likely among immigrants, immigrant mothers tend to give birth to healthier babies compared to U.S.-born mothers (Finch, Lim, Perez, & Do, 2007). Mexican immigrant mothers tend to have healthier behaviors during pregnancy than comparable native-born mothers, and they are more likely to breast-feed their infants (Padilla, Radey, Hummer, & Kim, 2006). Also, asthma and obesity are less common among first-generation children than among those born in the United States (Fuligni & Hardway, 2004), and research pertaining to adolescent risk behavior demonstrates that first-generation immigrant youths are less involved in risky behaviors—such as smoking or drug and alcohol abuse—than native-born adolescents (Cavanagh, 2007).

Yet many immigrant children experience increasingly negative health outcomes across generations and over time. As measured by body mass index, the health status of immigrant children decreases after arriving to the United States, suggesting that exposure to American culture may be associated with increasing rates of being overweight and obesity (Van Hook & Balistreri, 2007). Further, in 2002, immigrant parents of children under age 6 were more likely to report their children were in fair or poor health than native-born parents, and this difference even increased among low-income immigrant families (Capps et al., 2004).

Importantly, both individual differences in ethnicity and generation status affect the health outcomes of immigrant children and adolescents. Low-income immigrant parents in rural areas are less likely to seek preventive medical and dental care. Macro-level factors also drive immigrant and native-born differences in health, such as residential concentrations of immigrant groups. Neighborhood segregation can have protective effects by facilitating the informal flow of information about health resources for immigrant families, such as those from Mexican origins, but deleterious effects for some ethnic minorities, especially Puerto Ricans (Lee & Ferraro, 2007).

## EDUCATIONAL OUTCOMES AMONG IMMIGRANT CHILDREN

Most immigrant children are considered to be educationally at risk because of relatively low levels of school readiness, a lack of English skills due to a non-English home background, socioeconomic disadvantage, and their families' lack of familiarity with U.S. school systems. Overall, immigrant children, especially from Latino families, are less likely to enroll in formal preschool and center-based childcare that could help prepare them for the demands of formal schooling (Takanishi, 2004).

***English Learners.*** *Terri Gehman, center, assists English-as-a-Second-Language students as they shape letters at Stone Spring Elementary School in Harrisonburg, VA. A decade of explosive growth in immigrants has given Harrisonburg's schools a high percentage of English-as-a-Second-Language students.* AP IMAGES.

Research has provided little consensus as to how immigrant children perform in the U.S. educational system. Some research suggests that immigrants actually have better educational outcomes than similar native-born students; in contrast, some findings have pointed to troubling outcomes among immigrant students. Thus, mixed findings regarding immigrant school performance are reflected in the variety of approaches represented in the literature on immigrant educational outcomes.

When analyzing generational differences in achievement outcomes with standardized test scores and school grades, research demonstrates that first- and second-generation Mexican children arrive at kindergarten with lower cognitive skills than third- and higher generation Mexican children (Crosnoe, 2005), and, accordingly, by fifth grade, immigrants are found to have lower math and reading scores than children from U.S.-born families (Reardon & Galindo, 2008). Yet research examining performance during the middle-school grades has found that native-born Hispanics have higher tests scores but lower grade point averages than foreign-born Hispanics (Portes & Rumbaut, 2001) and that first- and second-generation eighth-graders have higher grade point averages and test scores than children in native-born families. When comparing educational outcomes between White students and the two most predominant immigrant groups, research shows that Latino students' educational outcomes lag far behind White students but that Asian immigrant students outperform White children.

In terms of high school or college completion, first-generation students demonstrate lower educational attainment than the second generation. However, the same patterns of improvement in attainment have not been found between first or second generations or third and higher generations.

In sum, and as with immigrant children's health outcomes, the differences in educational outcomes between immigrant groups, from different social strata, and from varied cultural backgrounds highlight the necessity of acknowledging the vast diversity among the immigrant population and the correspondingly complex picture of their educational experience in the United States.

## THEORETICAL FRAMEWORKS

A number of theoretical arguments have been used to explain the adaptation experiences of immigrant children. Most of them point to individual, family, community, and societal factors to explain differences in outcomes. Some theories attempt to explain broad patterns of assimilation among all immigrants, but cultural arguments are also commonly cited to explain the outcomes of certain groups of immigrant children. Three primary approaches to a theoretical understanding of immigrant assimilation are particularly prominent in the literature: (a) classical theories of assimilation, (b) segmented assimilation theory, and (c) the immigrant optimism hypothesis. Each of these predicts different patterns of improvement or deterioration in outcomes across time or generations.

First, classical theories of assimilation define *assimilation* as the acquisition of the receiving country's cultural values and historical memories. Adherents to this perspective argue that immigrants, regardless of place of origin or characteristics, inevitably become assimilated into American society. As a result, they become more similar to participants in the mainstream culture over time through social incorporation and economic upward mobility. This theory predicts that immigrant children experience improvement in outcomes based on generational succession, length of residence in the country, and concomitant integration into local social institutions.

Second, the segmented assimilation theory, developed by Alejandro Portes and Min Zhou (1993), emphasizes that immigrants from different origins assimilate into distinct sectors of U.S. society. The authors identified three alternate scenarios for assimilation. First, immigrants may experience upward assimilation with rapid integration into and acceptance by the mainstream, White middle class, sharing their cultural customs, economic success, and social advantages. Second, immigrant children may experience downward assimilation by becoming part of an existing minority underclass culture, thereby destined for permanent poverty and disadvantage. Finally, immigrant children may achieve upward assimilation with biculturalism (or assimilation without accommodation) by achieving similar economic status as the White middle class while at the same time preserving their own culture. Proponents of segmented assimilation theory argue that the assimilation of immigrant children is a function of the interaction of four main factors: the immigration experience of the first generation, the differences in the pace of acculturation between immigrant children and their parents, available family and community resources, and macro-level barriers to integration, such as racial discrimination or local residential segregation.

Finally, Grace Kao and Marta Tienda (1995) proposed the immigrant optimism thesis, specifically to explain differences in educational outcomes across immigrant groups. This hypothesis predicts that U.S.-born children of foreign-born parents will have better educational outcomes than first- or third- and higher generation students. Second-generation students benefit from strong parental support; it is through high expectations and encouragement that immigrant parents reinforce

educational success. However, this theory also predicts that second-generation children will experience improvement in outcomes not only because of their positive home environments but also because of their relatively stronger English skills, which are required to succeed in schools.

Cultural arguments also have been applied in explaining immigrant children's outcomes, particularly their educational outcomes. From a cultural perspective, John Ogbu (1987) proposed the cultural ecology model for explaining educational failure and success and categorized immigrants into two groups: voluntary and involuntary. Involuntary immigrants are those incorporated into the United States through slavery, conquest, or colonization, and voluntary immigrants left their home countries with the belief that greater opportunities awaited them in the United States.

Both voluntary and involuntary immigrants develop different perceptions of opportunities, adaptive strategies, and responses to treatment by the dominant group. Involuntary immigrants compare their situation and experiences to that of the mainstream, perceiving the dominant mainstream group as oppressive, resisting assimilation into this dominant mainstream group and developing an oppositional culture to preserve their own cultural identity. Further, they perceive schools to be dominated by mainstream, White, middle-class culture and thus may not cite education as a legitimate route to economic success—resulting in their limited effort and involvement in school. Voluntary immigrants compare their current situation with experiences "back home." Therefore, they perceive fewer obstacles to upward mobility, optimize the opportunities the receiving country provides, and have a positive frame of reference.

Also, the cultural discontinuity theory departs from explanations of minority students' lower performance using individual or group variables but instead claims differences are a consequence of mismatches in communication, behaviors, or language (Suárez-Orozco & Suárez-Orozco, 1995). Consequently, ethnic minorities' low school achievement is the result of curriculum designs that are not responsive to cultural or language differences between the dominant group and the immigrant group.

Most of the cultural arguments reviewed in this section bring important insights into how macro-social dynamics affect minority students' individual behaviors. However, these models are commonly considered to be highly deterministic because they do not allow for the possibility of school success or only portray schools as institutions engaged in the social reproduction of inequality.

## FUTURE DIRECTIONS

During the latter part of the 20th century, a number of perspectives were offered from a variety of disciplines toward understanding immigrant children's experiences and outcomes, and valuable theoretical formulations and empirical understanding have been achieved. However, the study of immigrant children remains immersed in conflicting theoretical discussions, mixed empirical findings, and unanswered fundamental questions, especially the question of whether immigrant children will successfully integrate into U.S. society, experiencing upward social and economic mobility.

The answer to this question is elusive because of at least three key issues: First, immigrants are not homogeneous; second, the characteristics of the immigrant population are still changing over time; and third, researchers grapple with the question of *who* migrates. A great deal of evidence suggests that the families who are able to migrate to the United States tend to be more educated, have greater financial resources, and have better health statuses than their counterparts who remain in the native country. This pattern is referred to as *immigrant selectivity*, which implies that those who migrate to the United States are the healthiest and most able of the sending country's population. Typically, immigrants arriving with higher levels of human or financial capital have greater access to gainful employment, better neighborhoods, and superior schools. The issue of immigrant selectivity raises another question: To which group does one compare the outcomes of immigrants in the United States to gauge their success—to the White middle class, their counterparts in their home country, or others?

In the future, research will also need to take into greater account the timing of immigration and age at arrival. A number of studies have shown that students arriving earlier in life tend to have better outcomes than those arriving in later adolescence, due in part to the fact that social adjustment depends on the age at which they arrive in the United States. Children who arrive in their preschool years, having more time to mature, can better adapt to the U.S. educational system, master English, and be less identifiable as foreign, which is potentially stigmatizing, relative to children who arrive during adolescence.

Another issue receiving increased attention is transnational movement between the United States and immigrants' home countries and how this type of movement affects assimilation. Additionally, the increasing diversity of the U.S. population inherently calls into question traditional racial and ethnic identities. Many immigrant youths assert biracial or binational identities, which also have implications for social incorporation into American society. In sum, as immigration continues to be a politically charged topic, questions regarding how immigrants fare once they arrive in the United States are unlikely to abate. Immigrant children are the fastest growing population in the United States, and most of them are native-born

U.S. citizens, which has implications for social and educational policy in terms of essential and beneficial service programs (e.g., English as a second language course offerings at schools, health information and medical services). Therefore, the future of the United States will benefit from a thorough, comprehensive, and multifaceted approach to understanding immigrant children's experiences and outcomes.

**SEE ALSO** Volume 1: *Assimilation; Bilingual Education; Racial Inequality in Education.*

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***Claudia Galindo***
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## INCARCERATION, CHILDHOOD AND ADOLESCENCE

**SEE** Volume 1: *Crime, Criminal Activity in Childhood and Adolescence; Juvenile Justice System.*

## INFANT AND CHILD MORTALITY

The death of an infant or child is always a tragic and costly event. The costs incurred include the trauma experienced by family and friends, the loss of years of

expected life, and the monetary expenditures incurred in the attempt to preserve the life of the infant or child. Moreover, infant/child mortality is often taken as a useful indicator of quality of life across the nations of the world (Caldwell, 1996). Infant mortality, in particular, is viewed as "a synoptic indicator of the health and social condition of a population" (Gortmaker & Wise, 1997, p. 147). Lowering infant and child mortality and eliminating inequalities in rates that exist by socioeconomic status (SES), race/ethnicity, and urban/rural residence are prominent goals for both national and international health organizations.

## MEASURING INFANT AND CHILD MORTALITY

The infant mortality rate (IMR) is defined as deaths of children before 1 year of age per 1,000 live births in a given year (or a set of contiguous years). The IMR may be computed on either a calendar year or a birth cohort basis. Using the calendar year approach, if an infant is born in October of year $t$ and dies in January of year $t + 1$, the birth will enter the denominator in year $t$, but the death will enter the numerator in year $t + 1$. Thus, only the birth cohort approach provides a true probability based on the population at risk, but it requires that birth and infant death records be linked from one year to the next. Because the two measurement approaches usually yield fairly similar results, and because a number of countries do not link records, international comparisons tend to be based on calendar year computations.

Infant mortality is often divided into the neonatal period (deaths before the 28th day of life) and the postneonatal period (deaths from the 28th day through the 364th day). Although timing of death is important, at times it is useful to partition infant mortality by cause-of-death structure into endogenous and exogenous deaths. The first category consists of deaths that are due largely to natal and antenatal factors whereas exogenous deaths are more apt to be due to environmental factors—both natural and social.

As used here, the child mortality rate refers to deaths of children younger than 5 years of age per 1,000 live births in a given year or time period. Other definitions might be used, such as deaths of children 1 to 4 or 1 to 14 years of age. However, the largest amount of data available from international organizations (e.g., United Nations Children's Fund [UNICEF], 2006) is for deaths to children less than 5 years of age. Although this definition combines deaths of children aged 1 through 4 with infant deaths, it is useful, whenever possible, to maintain a distinction between infant mortality and child mortality. Especially in developed countries, the etiologies of infant mortality and child mortality are distinct and may require different specific preventative approaches. At a more general level, reducing rates of both infant and child mortality often require approaches that are fundamentally similar.

Precise and comprehensive international comparisons of infant and child mortality rates are often difficult to achieve because of differentials in definitions, coverage, accuracy, and availability of vital statistics. In such cases, researchers may derive estimates using birth histories from nationally representative surveys (e.g., the Demographic and Health Survey) or indirect estimates using census data.

## CONCEPTUAL FRAMEWORK

Mosley and Chen (1984) have provided a conceptual framework, used primarily in developing countries, to study both social and biological determinants of child mortality. Working under the premise that "socioeconomic determinants must operate through more basic proximate determinants that in turn influence the risk of disease and the outcome of disease processes" (p. 27), these authors developed a multitiered framework consisting of three levels of determinants. The first—individual-level determinants—includes individual characteristics (e.g., maternal education, maternal health), as well as cultural factors such as norms and attitudes that dictate power relationships in the household, the value placed on children, and beliefs about the causes of disease. Next, household-level factors, mainly consisting of income and wealth, influence child mortality through the availability of food, potable water, clothing, housing, fuel and energy, transportation, hygienic and preventive measures, care for the sick, and health information. Finally, Mosley and Chen identified a number of community-level variables that potentially affect child mortality. These include ecological factors, such as rainfall and climate (which can influence food and water availability, sewage disposal, and the existence of parasites and bacterium), the political economy (organization of production, infrastructure, and political institutions), and heath system variables (such as vaccination programs, public information and education, cost subsidies, and technology).

Complementing Mosley and Chen's (1984) work, the Link and Phelan's (2002) conceptualization of "fundamental" social causes is often applied in more developed countries (e.g., Frisbie, Song, Powers, & Street, 2004). The term *fundamental* implies that the ability of individuals to reduce the risk of disease and death "is shaped by resources of knowledge, money, power, prestige, and beneficial social connections" (Link & Phelan, p. 730). Wise (2003) made the case that the widening relative racial gap in infant mortality in the United States is largely a function of differential access to health care at a time when the means of beneficial intervention have

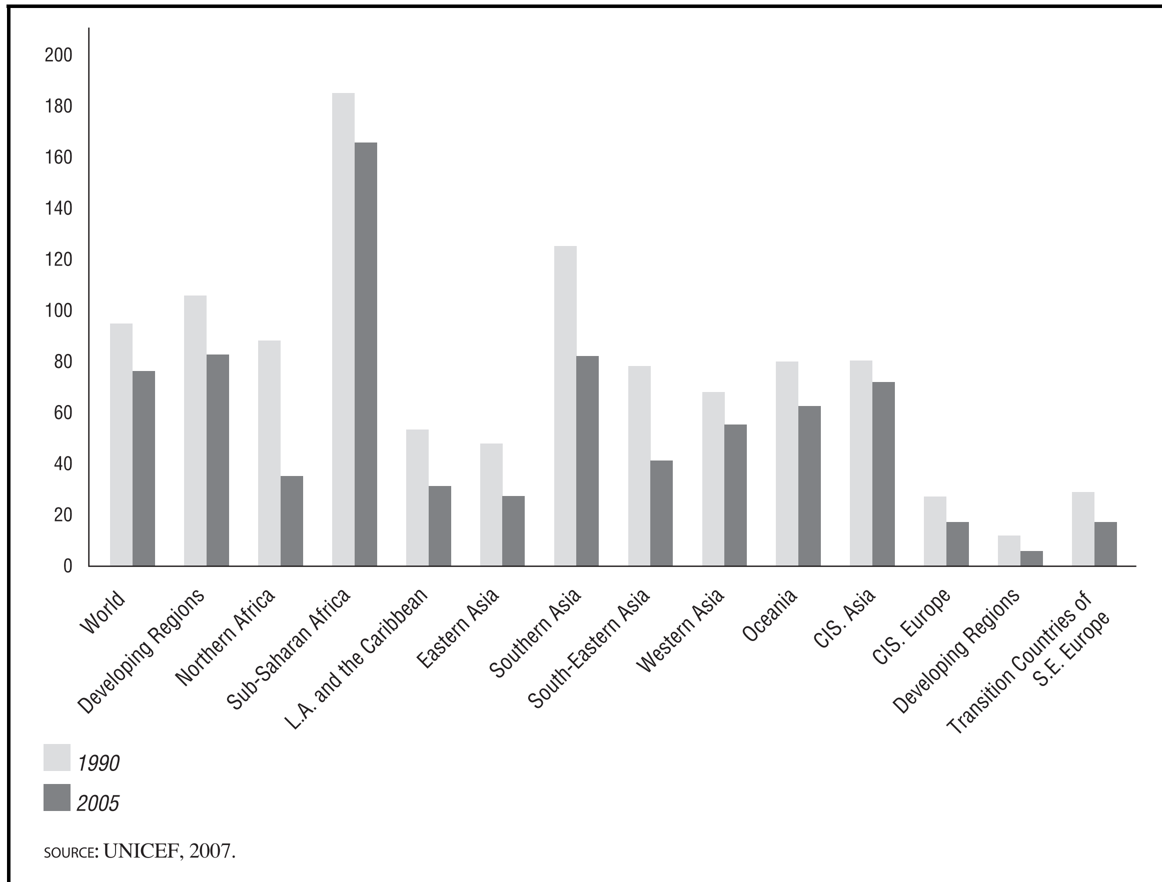


***Figure 1.*** *Mortality rate of children under age five per 1,000 live births.* CENGAGE LEARNING, GALE.

been greatly expanded, and Gortmaker and Wise (1997) warned that greater racial disparities in mortality may follow advances in health services technology because of inequality of access to health care, which, in turn, is attributable to social inequality.

In both developing and developed nations, empirical research (e.g., Hummer et al. 1999; Wang, 2003) has identified a large number of risk factors that are associated with higher risk of infant and child mortality. Among the maternal risk factors are very young or old maternal age, low education, disadvantaged minority status, lack of adequate prenatal care, no breast-feeding, short birth spacing, risky behaviors (smoking, alcohol consumption, and drug use), low weight gain during pregnancy, and previous pregnancy loss and morbidity. Family risk factors include low SES (e.g., income and wealth), rural residence, and a large number of siblings. Among the community (or regional) risk factors are poor sanitation levels, lack of availability of health care, and absence of health-promoting programs. Characteristics of the infant itself, including low birthweight, preterm birth, gestational age, fetal immaturity, male sex, and plurality are important and may be regarded as the most proximate risk factors for infant mortality.

## INFANT AND CHILD MORTALITY: RATES AND TRENDS

Rates of infant and child mortality differ substantially around the world, and progress in reducing these rates varies dramatically by level of societal development. Figure 1 displays estimated under-5 mortality rates per 1,000 live births by world regions for the years 1990 and 2005. For the world as a whole, the relative decline during this period was approximately 20% (from 95 to 76 deaths per 1,000 live births). Whereas the relative rate of decline (22%) slightly outpaced that for the world, child mortality levels were much higher in developing regions (106 in 1990 and 83 in 2005). In sub-Saharan Africa, the rates were 185 and 166 in 1990 and 2005, respectively—a drop in the rate of only 10%. In sharp contrast, in developed countries, children died at a rate of 12 per 1,000 at the first time point, with a decline to 6 per 1,000 in 2005 (United Nations, 2007).

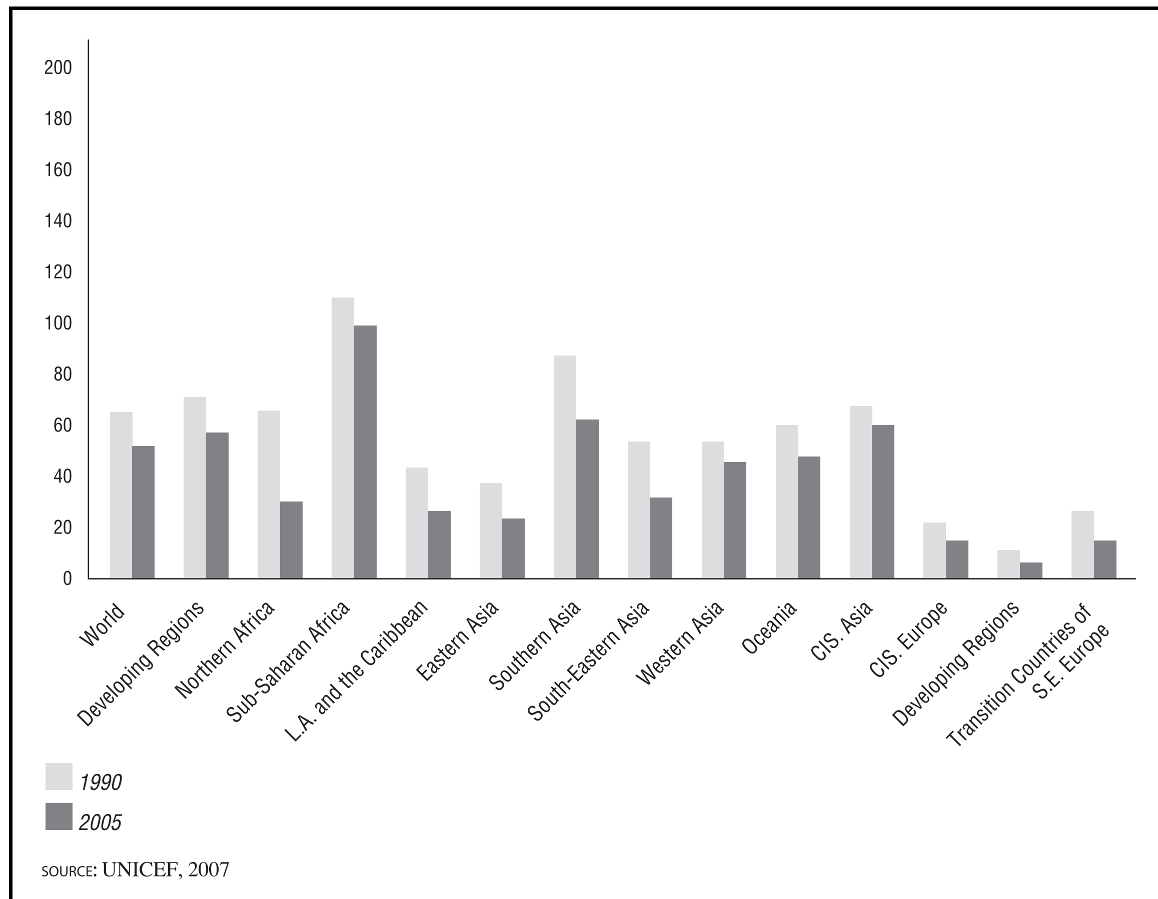


***Figure 2.*** *Infant mortality per 1,000 live births.* CENGAGE LEARNING, GALE.

Comparable values for infant mortality appear in Figure 2. Across all countries, the relative decline between 1990 and 2005 (20%) matched that for child mortality, and the same was true in developing regions, which recorded a reduction in the IMR from 71 per 1,000 to 57 per 1,000 over the time period. Once again, sub-Saharan Africa was the most disadvantaged. The IMR for that region was 110 in 1990 and 99 in 2005—again, an improvement of only 10%. Developed regions were once more able to achieve a 50% decrease (from 10 to 5 infant deaths per 1,000 live births). Although their rates do not approach the high levels of sub-Saharan Africa, other regions, particularly northern Africa, southern Asia, and the Asian portion of the Commonwealth of Independent States (essentially the countries that emerged from the breakup of the Soviet Union) are also greatly disadvantaged with respect to both child and infant mortality. An important distinction here is that northern Africa and southern Asia were able to achieve substantial reductions in child and infant mortality rates between 1990 and 2005, whereas the decline in the Asian portion of the Commonwealth of Independent States was relatively small (United Nations, 2007).

In addition to between-country differences in infant and child mortality, profound disparities exist within nations as well. The most affluent or otherwise more advantaged segments of the population tend to have lower rates of infant and child mortality, whereas less advantaged groups, on average, consistently have higher mortality. Such a polarization has been observed both for entire countries (Frenk, Bobadilla, Sepúlveda, & López Cervantes, 1989) and for local areas (e.g., Forbes & Frisbie, 1991). Infant and child mortality have been found to vary substantially across groups based on characteristics such as education, income, race/ethnicity, and urban/rural residence.

Within-country disparities in infant and child mortality exist for both developed and developing nations. For example, in the United States the mortality rate for non-Hispanic White infants in 2004 stood at 5.7 per 1,000 live births, as compared to a rate of 13.6 for non-Hispanic Black infants. Other U.S. minorities, including Native Americans (IMR = 8.5) and Puerto Ricans (IMR = 7.8), also had elevated rates (Mathews & MacDorman, 2007). One likely reason for the race/ethnic disparities in

the United States is the social and economic inequality that exists between the more affluent White population and disadvantaged minorities, such as differences in access to health care, health insurance, and nutritional foods.

## SPECIFIC CAUSES OF DEATH

Research on specific causes of death is crucial because such research can uncover factors that underlie infant and child mortality rates and thus informs attempts to lower these rates. The advances most responsible for lowering early childhood and postneonatal mortality are not the same as those for achieving lower neonatal mortality. Half of the deaths of children under 5 in less developed nations are due to five specific conditions (pneumonia, diarrhea, malaria, measles, and AIDS), and more than half of child deaths from all causes are associated with malnutrition (UNICEF, 2006). According to UNIICEF,

> Most of these lives could be saved by expanding low-cost prevention and treatment measures. These include exclusive breast-feeding of infants, antibiotics for acute respiratory infections, oral rehydration for diarrhoea, immunization, and the use of insecticide-treated mosquito netting and appropriate drugs for malaria. (p. 3)

One general conclusion regarding less developed nations is that low- (or no-) cost measures such as oral rehydration and breast-feeding are effective in driving down IMRs, whereas improvements in the economic and health infrastructures are needed to substantially reduce child mortality. This implies that, in developing nations at least, it is easier to achieve reductions in the IMR than in child mortality (Wang, 2003).

Looking only at the neonatal component of under-5 mortality for the world as a whole, three causes—preterm birth (28%), severe infections (26%), and birth asphyxia (23%)—account for more than three-fourths of all neonatal deaths. Adding congenital anomalies (8%) and neonatal tetanus (7%) increases the total to 92%. Although improved living standards have a beneficial effect on neonatal survival, research has suggested that lowering neonatal mortality depends more heavily on improvements in maternal and obstetrical care and on medical advances.

Specific causes of child mortality are different in developed, as compared to developing, countries. To illustrate, in the United States in 2004, the five leading causes of child mortality (using data on children ages 1 to 4 and excluding infant deaths) were unintentional injuries, birth defects, cancer, homicide, and heart disease, in descending order. Unintentional injuries were far and away the most prominent cause (10.3 deaths per 100,000 children ages 1 through 4). The next most frequent cause was birth defects (3.6 per 100,000), whereas the rates for each of the other three causes were less than 3.0 (Federal Interagency Forum on Child and Family Statistics, 2007).

## FUTURE DIRECTIONS

One area in which future research is clearly needed involves the stubborn disparities in rates of infant and child mortality across subpopulations within countries. Theoretically, if one subpopulation of a country is able to achieve low rates of infant and child mortality, others should be able to do so as well. Yet, this is often not the case:

> The fact that a particular health intervention is used to prevent or treat a disease that is more prevalent among the poor does not mean that the poor will be the ones who benefit from increased spending on that intervention. In fact, without specific attention, just the opposite is likely to happen. (Freedman et al., 2005, p. 10)

Thus, rate disparities signal continued need for improvement. Disparities in rates of mortality by urban/rural residence, socioeconomic status, and race/ethnicity may be largely driven by differentials in access to health-promoting resources across subpopulations. To illustrate, when pulmonary surfactant replacement therapy was approved by the U.S. Food and Drug Administration (FDA) in 1990 for treatment of respiratory distress syndrome (RDS), individuals with higher incomes, health insurance, and greater access to the health care system were clearly best positioned to take advantage of this beneficial intervention. After FDA approval of surfactant therapy, the IMR for RDS declined for both Black and White infants, but the decline was much more substantial for Whites than for Blacks. Both clinical research (Hamvas et al., 1996) and a nationwide study using linked birth and infant death records (Frisbie et al., 2004) demonstrated that what had been a survival advantage in the risk of infant death from RDS for Blacks as compared to Whites before surfactant therapy was approved became a Black survival disadvantage after the approval of this innovation in perinatal technology. As suggested by Link and Phelan (2002), it is likely that more fundamental societal changes in resource distribution will have to occur before such discrepancies can be eliminated.

There are also paradoxical findings that need further investigation. For example, the U.S. Hispanic population, which is quite disadvantaged according to socioeconomic characteristics and health care access, is nevertheless characterized by an IMR that is much lower than that of non-Hispanic Blacks (with whom they share

social disadvantages) and similar to, or modestly lower than, that of non-Hispanic Whites. Further, the mortality rate of infants born to Hispanic immigrant women is even lower than among the native-born segment of this population (Hummer, Powers, Pullum, Gossman, & Frisbie, 2007). Several hypotheses have been offered as potential explanations for the paradoxically low IMR of U.S. Hispanics (especially those of Mexican origin). These include positive health selection of migration from Mexico and other countries of Latin America (that is, the healthiest persons migrate to the United States), culturally based social and family support systems that make for more positive pregnancy outcomes among this population, and healthier behaviors among Hispanics (Frisbie, 2005). Further understanding of positive mortality outcomes in the context of social disadvantage can provide valuable insights for programs and policies designed to assist other populations that currently experience higher rates of mortality.

Similarly, in developing countries, Caldwell (1986) has identified populations that are "health achievers" in the area of infant and child mortality in the face of resource disadvantages. Focusing on areas within countries (e.g., the state of Kerala within India) and entire countries (e.g., Costa Rica) that have lower rates of mortality than one might expect based on their overall wealth, Caldwell identified factors such as maternal education and autonomy, political will on the part of local/national governments, and equitable access to health care that can and do make a difference in health achievements. It is important that such achievements continue to be documented and that initiatives be implemented by policy makers as part of the effort to both lower rates of infant and child mortality and reduce resource-based disparities in these outcomes. Given the lack of information on infant and child mortality in a number of countries, realization of the latter goal means that more adequate procedures are needed for collection of data and dissemination of information on mortality in "data-poor" countries.

**SEE ALSO** Volume 1: *Birth Weight; Health Differentials/Disparities, Childhood and Adolescence; Illness and Disease, Childhood and Adolescence;* Volume 3: *Death and Dying; Life Expectancy; Mortality.*

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## INTELLIGENCE/IQ

**SEE** Volume 1: *Cognitive Ability.*

## INTERGENERATIONAL CLOSURE

A social network with "intergenerational closure" is characterized by social ties between (a) parents and their children's friends and (b) parents and their children's friends' parents (Coleman, 1988; Coleman & Hoffer, 1987). To illustrate the concept, consider a hypothetical social network of four parent–child dyads (A through D). The sociogram in Figure 1 represents both nodes and social ties within this social network. Dyads A and B have intergenerational closure because all four people know each other and regularly interact. Intergenerational closure requires social ties within and between families and generations. If any one of the social ties between the nodes in dyads A and B were missing, the social network would lack intergenerational closure. Parent–child dyads C and D illustrate the part of the network that lacks intergenerational closure. Child C is friends with child A, but parents A and C do not know each other. In addition, parents A and C do not know each others' children. For family D, it is seen that parent D knows parent B, but child D is not friends with child B. The absence of these ties across families and generations leaves parents C and D in a network without intergenerational closure.

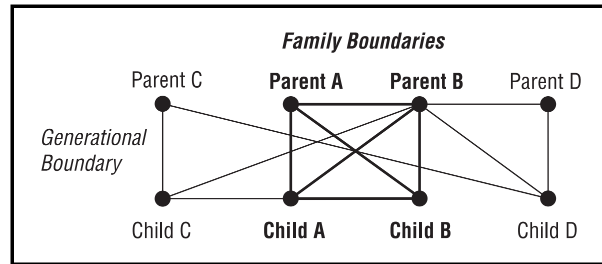


***Figure 1.*** *Intergenerational closure within a social network.* CENGAGE LEARNING, GALE.

Coleman (1988) theorized that intergenerational closure was critical in facilitating the creation of social capital for individuals within a social network. Network closure is a necessary condition for the formation and enforcement of norms that produce social capital. Parents' connections with their children's friends and their children's friends' parents facilitate: (a) the flow of information about their children's activities, (b) the communication of expectations to students, and (c) the establishment of norms that shape behavior (Coleman, 1988; Coleman & Hoffer, 1987). For Coleman, intergenerational closure can lead to the creation of a "functional community" that allows parents to shape and constrain their children's behavior (Coleman & Hoffer, 1987). In short, intergenerational closure is valuable because it produces social capital that helps students. Social networks that lack intergenerational closure make it difficult for parents "to discuss their children's activities, to develop common evaluations of these activities, and to exercise sanctions that guide and constrain these activities" (p. 226). Thus, a lack of intergenerational closure impedes the creation of social capital.

### DEVELOPMENT OF THE CONCEPT

Coleman first studied youth and adult cultures in *The Adolescent Society* (1961). In that study, Coleman examined the social relationships and peer culture of students in 10 Illinois high schools in 1957–1958. He found that adolescents of the 1950s were "cut off . . . from the adult society." They were "still oriented toward fulfilling their parents' desires, but they look[ed] very much to their peers for approval as well" (p. 9). The adolescents in Coleman's study were more interested in popularity (via athletics and dating) than academic success. Subsequent research on educational achievement and attainment indicated that both parents' and peers' expectations predicted students' own aspirations and educational attainment (Sewell, Hauser, Springer, & Hauser, 2004). Researchers hypothesized that "significant others" influenced student outcomes by providing role models for students to emulate. These seminal studies inspired many studies that examined how (a) parent–student interactions and (b) peer interactions affect academic outcomes.

Coleman (1988) believed that the heavy emphasis on human capital within the family (i.e., parental education) in status attainment research (Blau & Duncan, 1967; Jencks et al., 1972; Sewell & Hauser, 1975) provided an incomplete picture of how families helped their children succeed in school. Coleman introduced his concept of "social capital" to redirect attention from individual characteristics toward the importance of social

relationships in the status attainment process. Social networks with intergenerational closure could empower adults to impose their value system upon young people and direct them toward academic success (in contrast with the adults in *The Adolescent Society*).

Empirical research on Coleman's theory led to several subsequent theoretical advances in the concept of intergenerational closure. Morgan and Sørensen (1999a) used Coleman's theory to propose two ideal typical schools. "Norm-enforcing" schools have social networks with high levels of intergenerational closure among children and parents, as well as overlapping ties with teachers and school administrators. The dense social networks of norm-enforcing schools can lead to the creation of social capital (as Coleman believed), but they could also become "suffocating communities in which excessive monitoring represses creativity and exceptional achievement" (Morgan & Sørensen, 1999a, p. 663). In contrast, parents in "horizon-expanding" schools invest their time and energy in forming relationships with adults outside of the school setting. Morgan and Sørensen disagreed with Coleman's assumption that norm-enforcing schools are more beneficial for students and argued that an equally compelling case can be made for the merits of horizon-expanding schools.

Carbonaro (1999) noted an important (but under-appreciated) issue in Morgan and Sørensen's (1999a) operationalization of Coleman's theory: Intergenerational closure may operate at either the individual or the school level. Carbonaro argued that Coleman's writings reflected an individual level explanation: Intergenerational closure provided a mechanism for sharing information, setting expectations, and enforcing norms, and if students were not nested within such a network, they would not enjoy the benefits of this normative system. When viewed in this way, intergenerational closure is a mechanism of social control that benefits only students connected to the network.

In Carbonaro's (1999) view, group level explanations were plausible—students could benefit from attending a school with high levels of intergenerational closure even if they themselves were not connected to an intergenerationally closed network. Carbonaro argued, however, that more theorizing about the specific mechanisms involved in a group level explanation was needed to guide future research in this area.

Finally, it is unclear which characteristics of the social network matter most when judging the importance of intergenerational closure for student outcomes. Carbonaro (1999) argued that the quantity of "closed" ties is likely less important than the quality of the relationships between individuals within the network. Membership in a closed social network that creates a "dysfunctional" community (i.e., a social network that discourages academic achievement) will likely depress academic performance. In short, the number of social ties in a network may be less important than how they are used by actors within the social network.

## MAIN RESEARCH FINDINGS

Despite their lengthy discussion of intergenerational closure and functional community, Coleman and Hoffer (1987) lacked direct measures of these concepts in their study and thus provided no evidence to support their claims. The National Education Longitudinal Survey of 1988 (NELS:88) was the first data set that collected information on parents' relations with their children's friends and the friends' parents. There was general agreement that the NELS:88 data set had some important limitations (see Carbonaro, 1999; Hallinan & Kubitschek, 1999; Morgan & Sørensen, 1999b). Most notably, NELS:88 lacked measures of important attributes of social networks (e.g., network density, centrality). In addition, there was almost no information regarding how actors within the social network interacted with one another—a key component of Coleman's argument. Despite these limitations, several important empirical studies of the NELS:88 emerged.

Teachman, Paasch, and Carver (1996) examined which students had high levels of intergenerational closure in eighth grade. As Coleman predicted, children in Catholic schools had higher levels of closure than public school students. Their findings also revealed that parents with more education and income were connected to networks with higher levels of closure. Finally, Black students had lower levels of closure than White students.

Muller (1993) analyzed the cross-sectional eighth-grade NELS:88 data and found that students in social networks with (parent-reported) higher levels of intergenerational closure had higher test scores and grades. Pong (1998) also analyzed the NELS:88 data to examine the effects of intergenerational closure on achievement. Pong, however, used a longitudinal design (eighth to tenth grade) as well as student reports of intergenerational closure. She found that neither individual- nor school-level measures of "parents know friends' parents" were related to math or reading achievement. Carbonaro (1998) also examined how intergenerational closure was related to achievement using parent measures of closure and a longitudinal design that spanned eighth to twelfth grade. He found a positive relationship between closure and math achievement but no significant relationship between closure and cumulative grade point average in twelfth grade.

Morgan and Sørensen (1999a) took a very different approach in their analysis. First, unlike the aforementioned studies, Morgan and Sørensen included information

regarding student friendships within the school as well as children's friends' parents in their measure of school closure (labeled "social closure"). Second, Morgan and Sørensen aggregated their intergenerational closure measure to the school level. They found no significant differences in average math achievement levels among schools with differing levels of social closure. When they examined "friends in school" and "parents known by parents" separately in the analysis, they found that (a) in-school friendships had a positive relationship with math achievement, and (b) "parents known by parents" had a negative relationship with achievement. Carbonaro (1999) reanalyzed his data by adding controls for "friends in school" (at the individual level) and school-level closure to his models. He found that these new controls, particularly friends in school, made the relationship between closure and math achievement statistically insignificant. Pribesh and Downey (1999) also found that controlling for many different types of social ties among parent, friends, and friends' parents yielded closure coefficients that were either insignificant or negative.

A more recent study of the relationship between intergenerational closure and achievement analyzed data from the Educational Longitudinal Study of 2002 (ELS:2002). Rosenbaum and Rochford (in press) found that the number of in-school friends' parents known by a parent was positively related to tenth grade math (but not reading) scores. The analyses in this study, however, were cross-sectional and therefore susceptible to bias due to self-selection. A second wave of ELS data is now available for analysis to address this limitation.

Researchers have also examined whether intergenerational closure is related to student outcomes other than achievement. One outcome that received considerable attention was high school dropout. Teachman et al. (1996) found that (net of other controls) intergenerational closure was unrelated to a student's chances of dropping out of high school by the end of 10th grade. However, Teachman, Paasch, and Carver (1997) and Carbonaro (1998) found that by the end of twelfth grade, students with higher levels of intergenerational closure were less likely to drop out of high school. Teachman et al. (1997) also found that the closure–dropping out relationship grew stronger as parental income increased.

Finally, a few studies have examined how intergenerational closure is related to outcomes that mediate the closure relationship with achievement and attainment. Muller and Ellison (2001) found that students with higher levels of closure had higher levels of religious involvement, felt more in control of their individual circumstances (i.e., locus of control), spent more time on homework, and were less likely to cut class. Intergenerational closure was unrelated, however, to students' own educational expectations and their chances of enrolling in an advanced math course. Fletcher, Hunter, and Eanes (2006) collected data on 400 third-grade children and found that intergenerational closure was related to students' self-efficacy but not to internalizing or externalizing problem behaviors. However, these relationships varied based on the types of friends students had (e.g., in school, neighborhood, family), as well as the student's race or ethnicity.

## FUTURE RESEARCH

The concept of intergenerational closure remains an important theoretical contribution because it highlights the role that social relationships play in the status attainment process. Although Coleman's ideas about network characteristics provided sociologists with an ambitious research agenda, empirical research has not fulfilled this initial promise. There are several ways to improve future research on intergenerational closure and bring about a greater understanding of how social relationships affect student outcomes.

First, Coleman's theory about intergenerational closure needs further conceptual development. Coleman's writings are too general to provide useful, testable hypotheses. Researchers must work harder to identify how closure might affect students' academic outcomes. Coleman pointed to information flows, shared expectations, and collective norms as key features of closed networks that led to the creation of social capital. Future researchers need to specify what information, expectations, and norms matter for student outcomes. In addition, researchers need to identify specific mediating mechanisms that link intergenerational closure with educational outcomes. Morgan and Sørensen (1999a) identified (theoretically but not empirically) student effort as the main mediating mechanism that linked intergenerational closure to academic achievement. Further theorizing about additional mediating mechanisms will help yield more testable hypotheses for researchers to examine and ultimately create a deeper understanding of how intergenerational closure actually works.

Surprisingly, there is almost no discussion of what constitutes a social tie in this literature. When parents say they "know" another parent or child, what do they mean? Is there some minimal threshold for "knowing," or are there important dimensions of "knowing" that can be measured and quantified? This is a major conceptual gap that must be addressed. Researchers who study intergenerational closure would benefit from a closer reading of the literature on social networks and stratification (see Lin, 1999, for a review). Concepts such as network centrality, homophily, bridging ties, and strong/weak ties

can strengthen the underlying theoretical framework that motivates researchers' analyses.

Future research on intergenerational closure also requires better data. Ideally, data that maps the full set of social relationships among parents and students within several schools would provide much greater insight into whether and how social ties between students and parents affect student outcomes. A major limitation of available data is that individuals and schools remain the sole units of analysis. Individuals are nested within social networks, both inside and outside school, and social networks must become units of analysis to advance empirical work in this area.

Analyses of social network data could address some interesting and important questions in this area. Returning to Figure 1, it is clear that the social network is "closed" for some nodes but not others. Do students C and D benefit from the closure enjoyed by A and B? If so, do these students benefit equally? How much would increasing the degree of intergenerational closure within the network affect student outcomes? Is there a point of diminishing returns to additional closed ties because of the circulation of redundant information? Do bridging ties with other social networks with more closure have effects on student outcomes? This is just a sampling of the many questions that researchers could address if they had access to network data for parents and students. With more detailed and better quality information on social networks, it is likely that further research on intergenerational closure will fulfill its initial promise.

**SEE ALSO** Volume 1: *Coleman, James; Cultural Capital; Human Capital; Parental Involvement in Education; Parent-Child Relationships, Childhood and Adolescence; Social Capital.*

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***William Carbonaro***

# INTERPRETIVE THEORY

Since the early 1980s, theoretical advances in the sociology of childhood and youth have broken free from the individualistic doctrine that regards children's social development solely as the private internalization of adult skills and knowledge. Central to interpretive theory is the

appreciation of the importance of collective, communal activity—how children and youth negotiate, share, and create culture with adults and each other (Corsaro, 2005; James, Jenks, & Prout, 1998; Thorne, 1993). This emphasis on collective activity within a cultural context in interpretive theory is clearly in line with the life-course perspective.

## INTERPRETIVE REPRODUCTION

Interpretive theory builds on Anthony Giddens's (1984) notion of the duality of social structure. In his theory of structuration Giddens argued that "the structural properties of social systems are both medium and outcome of the practices they recursively organize" (p. 25). A central concept in interpretive theory is *interpretive reproduction* (Corsaro, 2005). The term *interpretive* captures innovative and creative aspects of children's participation in society. Children and youth produce and participate in their own unique peer cultures by creatively taking or appropriating information from the adult world to address their own concerns. The term *reproductive* captures the idea that children and youth are not simply internalizing society and culture but are also contributing to cultural production and change. The term also implies that children and youth are, by their very participation in society, constrained by the existing social structure and by social reproduction.

Although many developmental psychologists have stressed the importance of children's agency and now recognize that social and cultural context is important, they often view context in static terms, as a variable affecting individual development. From the perspective of interpretive reproduction, however, cultural context is not a variable that affects development. Rather cultural context is a dynamic that is continually constituted in routine practices collectively produced at various levels of organization. Even when developmental psychologists visualize context as something that is collectively produced, primary concern usually remains with how these collective processes get inside the individual child and not the collective processes themselves.

Children and youth do, of course, develop individually, but throughout this development the collective processes they are always part of are also changing. These processes are most accurately viewed as occurring in the interwoven local cultures making up children's worlds. When discussing these collective processes developmentally or longitudinally, one must consider the nature of *membership* of children and youth in these local cultures and the changes in their degree or intensity of membership and participation over time. One also must consider how different structural and institutional features constrain and enable the collective processes of interest. From this view human development, or perhaps better phrased *the development of humans*, is always collective, and transitions are always collectively produced and shared with significant others.

## ROUTINES, DEVELOPMENT, AND PEER CULTURES

Children and youth participation in cultural routines is an essential aspect of the interpretive approach. Routines, such as greetings, run and chase games, role play, insult exchanges, and gossip, are recurrent and predictable activities (Corsaro, 2005; Eder & Nenga, 2003). Thus, they provide actors with the security and shared understandings of belonging to a cultural group. Furthermore, this very predictability empowers routines, providing frames with which a wide range of sociocultural knowledge can be produced, displayed, and embellished. In this way cultural routines serve as anchors that allow children and all social actors to deal with ambiguities, the unexpected, and the problematic comfortably within the friendly confines of everyday life.

The interpretive approach views development over the life course as reproductive rather than linear. From this perspective, children enter into social groups and, through interaction with others, establish social understandings that become fundamental knowledge upon which they continually build. Thus, interpretive theory extends the notion of stages of cognitive and emotional maturity by viewing development (or the evolving membership of children or youth in their culture) as a productive–reproductive process of increasing density and reorganization of knowledge that changes with children's developing cognitive and language abilities and with changes in their social worlds. A major change in children's worlds is their movement outside the family. By interacting with peers first in child-care centers and preschools and then in age-graded schools, children produce a series of peer cultures.

Interpretive theory stresses that the production of peer culture is not a matter of simple imitation of the adult world. Children and youth creatively take or appropriate information from the adult world to produce their own unique peer cultures. Such appropriation is creative in that it both extends or elaborates peer culture (transforms information from the adult world) and simultaneously contributes to the reproduction of the adult culture. Thus, the peer cultures of children and youth have an autonomy that makes them worthy of documentation and study in their own right.

From the interpretive perspective peer culture is defined as a stable set of activities or routines, artifacts, values, and concerns that children and youth produce and share with peers (Corsaro, 2005; Corsaro & Eder,

1990). Corsaro (1985, 2005) has discovered that children produce and participate in peer cultures as young as 3 years of age in his studies of preschools in the United States and Italy. A good example of an aspect of children's peer cultures can be seen in their attempts to evade adult rules through their collaboratively produced secondary adjustments, which enable children to gain a certain amount of autonomy over their lives in the preschool.

For example, the children employed several concealment strategies to evade the rule that prohibited bringing toys or other personal objects from home to school. This rule was necessary in the preschool because personal objects were attractive to other children simply because they were different from the everyday materials in the preschools, and as a result the teachers were constantly settling disputes about these items. Therefore, such objects were not to be brought to school; if they were and were discovered by a teacher, they were taken away and stored in the child's locker until the end of the day. In both the American and Italian schools Corsaro studied, the children evaded the rule by bringing small, personal objects that they could conceal in their pockets. Particular favorites were toy animals, race cars, and small dolls. Of central importance here is that the children did not get the idea of bringing these small objects from parents, who surely did not tell their children: "The teacher says you can't bring toys, so just take your toy race car and hide it in your pocket!" No, the children come up with these strategies, share them with their peers, and delight in feeling they are fooling the teachers.

The teachers, of course, often knew what was going on but simply ignored the transgressions. The teachers overlooked these violations because the nature of the secondary adjustments often eliminated the organizational need to enforce the rule. Children shared and played with smuggled objects surreptitiously to avoid detection by the teachers. If the children always played with personal objects in this way, there would be no conflict and hence no need for the rule. Thus, the children's secondary adjustments (which are innovative and highly valued aspects of the peer culture) often contribute to the maintenance of the adult rules.

The story does not end there, however. The children's secondary adjustments to school rules often led to the teachers' selective enforcement of the rules and, in some cases, to changes in the rules and in the organizational structure of the preschool. Corsaro found that teachers relaxed the enforcement of school rules because they recognized the creativity of features of the peer culture. For example, in an American school, teachers first overlooked a rule prohibiting children from moving objects from one play area to another; they allowed the children to use string and blocks from a worktable to create a "fishing" game by dangling the string from an upper-level playhouse to their peers below, who then attached the blocks. The teachers then actually endorsed the secondary adjustments by joining in the play. In these instances the teachers themselves engaged in secondary adjustments to their own rules and exposed the children to a basic feature of all rules—that is, knowledge of the content of a rule is never sufficient for its application; rules must be applied and interpreted in social context.

## LIFE TRANSITIONS AND PRIMING EVENTS

Interpretive theory focuses not only on children's production and participation in a series of peer cultures but also on the nature of critical transitions in children's lives. Transitions are seen as collective events that are often embedded in routine activities that signify that one is part of a group. At the same time, cultural practices in these routines prepare or prime members for future transitions. Along these lines, William Corsaro and Luisa Molinari (2005) developed the notion of *priming events*. Priming events involve activities in which children, by their very participation, attend prospectively to ongoing or anticipated changes in their lives. Some priming events Corsaro and Molinari (2005) identified in their research on Italian children's transition from preschool to elementary school were formal and organizational. These included the preschool children's visits to the elementary school to see the school and meet their new teachers and an end-of-the-year party to celebrate their three years in the preschool. These priming events are much like rites of passage (van Gennep, 1960).

Corsaro and Molinari (2005) also discovered other more subtle events that were part of familiar routines in the children's peer culture. For example, two children got into a teasing routine, or what is often referred to in Italian as *discussione*. Angelo accused Marina of telling a lie about him and said that "her nose would grow longer than Pinocchio's." Marina responded that she was not a liar, but the dispute continued with Angelo saying his brother in first grade would beat up Marina. Marina said she was not afraid because her brother in second grade would beat up Angelo's brother in first grade. Angelo then countered that his brother in third grade would beat up Marina's brother in second grade. Mariana then started to laugh and say her cousin in fourth grade would beat up Angelo's brother in third grade. Both children then began laughing and the dispute ended. The use of humor by turning to fanciful threats (the impossibility of having siblings or relatives at every grade level) lightened the seriousness of the discussion and deftly connected a typical peer spat to the children's ongoing concern about ending their time together as a group and moving on to

elementary school, where they would join one of four first-grade classes. Thus the children's thinking about age in terms of where they are and where they are going in the educational system is anchored in the everyday teasing and *discussione* of the peer culture.

The concept of priming events shares certain features with an often referred to concept in sociology: Robert Merton's (1968) "anticipatory socialization." However, priming events, because they are part of identifiable collective actions, provide empirical grounding to Merton's more abstract concept.

Merton (1968) saw anticipatory socialization as a function of reference groups and defined it as "the acquisition of values and orientations found in statuses and groups in which one is not yet engaged but which one is likely to enter" (p. 438). Although Merton noted that anticipatory socialization can occur through formal education and training, he argued that much of such preparation "is *implicit*, *unwitting*, and *informal*" (p. 439).

Anticipatory socialization is frequently cited in work on childhood and adult socialization. Yet there was no inductive empirical grounding of the concept in Merton's presentation, nor has there been a tradition of empirical research on the concept. In Merton's discussion children themselves are not mentioned, but one can infer that the socialization he implied even if not didactic is still something that is completed with the appraisals of those with more power; in the case of children these appraisals come primarily from adult caretakers. Merton's contention that anticipatory socialization is unwitting and informal does imply some control and power to children or adults in the transitions in which they are participating, but determining the nature of this power or agency depends on investigation of empirical events. Such events and their characteristics are captured in the notion of priming events, which defines the processes more precisely as having interactive and communicative features that Merton only speculated about. As mentioned earlier, Corsaro and Molinari (2005) found that priming events often involve the innovative productions of children within their peer cultures as well as input from adults.

A major strength of life-course research is its insistence on situating the developing individual in historical time and structural or cultural place. Glen Elder (1994) defined the life course as a "multilevel phenomenon, ranging from structural pathways through social institutions and organizations to the social trajectories of individuals and their developmental pathways" (p. 5). The concept of priming events, or collective activities that impel social actors to attend prospectively to ongoing and anticipated changes in their lives, clearly can aid in the conceptualization and empirical investigation of the form and meaning of transitions over the life course (Corsaro & Molinari, 2005, p. 22).

**SEE ALSO** Volume 1: *Friendship, Childhood and Adolescence; Peer Groups and Crowds; Socialization; Youth Culture.*

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***William A. Corsaro***

# J–L

## JUNIOR HIGH SCHOOL

**SEE** Volume 1: *Stages of Schooling.*

## JUVENILE JUSTICE SYSTEM

Adolescence is a time of excitement and possibility; during the teenage years, lives and personalities take shape and individuals make the first set of choices that will affect them in adulthood. Adolescence is a turbulent time for many young people, and some struggle as they make the difficult transition between childhood and the adult world. They find out the hard way that mistakes made in adolescence can change the trajectory of a young life dramatically. Some spend years in a correctional facility for a criminal decision made as a teenager.

The juvenile justice system is charged with handling a difficult segment of the population: children and adolescents who have committed crimes and may be considered a danger to the community or to themselves. Although each state has a slightly different vision for dealing with juvenile offenders, the juvenile justice system generally attempts to correct wayward youth at a critical point in the life course. Administrators and staff members who work in the system try to intervene and redirect the life trajectories of troubled adolescents, pointing them toward more conforming futures. As B. C. Feld explained, "One premise of juvenile justice is that youths should survive the mistakes of adolescence with their life chances intact" (Feld 1996, pp. 425–426). Unfortunately, virtually since its inception the juvenile justice system has struggled to meet these high ideals and to merge the interests of the community with the best interests of the young people in the system.

### JUVENILE JUSTICE: BEGINNINGS

The first juvenile court was created in Chicago in 1899. Although there were houses of refuge and reformatories to house dependent and delinquent youth before that time (Krisberg, 2005), Chicago at the turn of the 20th century was the home of the reform movement that led to the modern juvenile justice system. The "child savers" were feminist reformers who helped pass special laws and create new institutions for juveniles (Platt, 1977, p. 75). The child saving movement was dominated by middle and upper class women who "regarded their cause as a matter of conscience and morality … the child savers viewed themselves as altruists and humanitarians dedicated to rescuing those who were less fortunately placed in the social ordre" (Platt, 1977, p. 3). They built the juvenile justice system on the philosophy of *parens patriae*: the belief that the state—in the form of the juvenile court—should act as a "superparent" to its troubled youth, treating them sternly but kindly and always attempting to act in the best interests of the individual child.

Initially, until concerns with labeling and the "criminal contamination" of nondelinquent youth arose in the 1960s and 1970s, delinquent children were treated and housed alongside neglected children and those who were dependent on the state for their basic needs. These children were generally sent to reformatories or reform schools in the country which were designed using a cottage system, and were meant to teach working class

skills and simulate family life. In the original juvenile court judges had full discretion in deciding how to sentence the children who came before them. Because the court was expected to act in the best interest of each individual child, children had few rights; delinquent and dependent youth were subject to judges' personal biases and sometimes discriminatory practices.

Studies of juvenile "reform schools" and state training schools through the 1970s revealed conditions that in the early 21st century would be viewed as unacceptable: Staff members and cottage "parents" frequently used physical means to punish the young people in their care, striking, shaking, and shoving them (Weber, 1961, Wooden, 1976); boys were housed in the "tombs," an extreme form of isolation, and were not allowed to speak in their cottage living units (Feld, 1999, Miller, 1998); and younger and weaker youths were victimized by their tougher peers (Bartollas, Miller, & Dinitz, 1976, Feld, 1977, Polsky, 1962).

The juvenile corrections system was altered significantly when the Juvenile Justice Delinquency and Prevention (JJDP) Act was passed in 1974. In the 1960s and 1970s concerns about the labeling of minor offenders as delinquents and a focus on rehabilitation led to widespread attempts at deinstitutionalization and community alternatives. The JJDP Act offered financial incentives for states to decriminalize status offenses—acts that would not be crimes if committed by adults—and deinstitutionalize status offenders. Secure juvenile institutions became the agency of last resort, reserved for the most serious juvenile offenders, and alternative programs were developed to provide supervision in the community and care for delinquent children who had committed less serious crimes.

In the contemporary period agencies charged with supervising juvenile offenders after they have been adjudicated delinquent, the equivalent to an adult being convicted of a crime, fall under the umbrella term of *juvenile corrections*. Juvenile offenders may be treated in the community or may be placed in secure facilities; in essence, they may get probation. They may be placed in a group home, halfway house, or foster care; they also may be sentenced to serve time in secure facilities such as training schools and wilderness programs. Together, these agencies share the responsibility for "correcting" or attempting to reform delinquent youth. In addition, new alternatives have been created to try to divert minor offenders from the system. Juvenile drug treatment courts and peer courts, where teens hold each other accountable for minor offenses by holding their own hearings and deciding appropriate sanctions, are two examples of programs that focus on treatment and accountability without subjecting offenders to the stigma of being labeled delinquent and processed through the formal juvenile justice system.

## CHANGES IN JUVENILE JUSTICE: MORE PUNITIVE TIMES

In the last decade of the 20th century and the first decade of the 21st the United States made a clear effort to "get tough" on juvenile crime, and the sentencing of juvenile offenders became increasingly punitive (Feld, 1999). The possibilities for punishment shifted to the point where secure training schools seemed to be the kinder, gentler option; the two alternatives facing serious juvenile offenders were usually confinement in juvenile correctional facilities and confinement in adult prisons (Inderbitzin, 2006b).

This shift in attitude perhaps is best symbolized by the public fear of juvenile superpredators that developed in the mid-1990s. Popular magazines and media outlets ran prominent features warning the public of a new epidemic of young villains. Some scholars fueled the fear by making statements that demonized delinquents. For example, W. J. Bennett, J. J. DiIulio, and J. P. Walters stated, "The problem is that today's bad boys are far worse than yesteryear's, and tomorrow's will be even worse than today's" (Bennett, DiIulio, and Walters, 1996, pp. 26–27). Those authors went on to describe the juvenile offenders of people's worst fears: "America is now home to thickening ranks of juvenile 'super-predators'—radically impulsive, brutally remorseless youngsters, including ever more preteenage boys, who murder, assault, rape, rob, burglarize, deal deadly drugs, join gun-toting gangs, and create serious communal disorders. They do not fear the stigma of arrest, the pains of imprisonment, or the pangs of conscience" (Bennett et al., 1996, p. 27).

In response to the fear engendered by such vivid and hard descriptions of America's teenage population, public sentiment shifted, and the pendulum of juvenile justice swung from rehabilitation to punishment. The argument seemed to be that as long as young offenders commit serious crimes, they should be prepared to face the consequences. Indeed, it seemed that "recent reforms in juvenile justice have placed the notion of youth itself on trial" (Grisso & Schwartz, 2000, p. 5). By the mid-1990s public fear translated into political action and most states had passed new laws that made it easier to transfer juvenile offenders to the adult system; there was a public movement to adjudicate more and more juveniles in adult criminal courts and confine them in adult prisons (Howell, 1998). In addition, many states enacted mandatory minimum sentences that were designed for both adult and teenage offenders; that led to long sentences in adult prisons without the incentive of being able to earn time off for good behavior for some adolescent offenders.

The rationale behind having a separate system for delinquents rests on two distinct assumptions: the belief that juveniles are less responsible for their crimes than their adult counterparts are and the idea that because adolescents are thought to be more malleable than adults

***Juvenile Detention.*** *Inmates at the Department of Youth Services juvenile boot camp wait to go outside for physical training.* AP IMAGES.

and still developing as individuals, there is generally more hope for rehabilitation with younger offenders.

Developmental psychologists have argued that "adolescence in modern society is an inherently transitional time during which there are rapid and dramatic changes in physical, intellectual, emotional, and social capabilities ... other than infancy, there is probably no period of human development characterized by more rapid or pervasive transformations in individual competencies" (Steinberg & Schwartz, 2000, p. 23). Because they work primarily with adolescents, juvenile justice agencies have the potential to exert enormous influence over the rapidly changing lives of their captive populations. Because most delinquents will return to the community in months or a few years, it is imperative to try to find effective treatment programs for adolescent offenders.

## JUVENILE JUSTICE CHALLENGES

Since the 1980s scholars have been questioning the utility of a separate court system for juvenile offenders, pointing to "its transformation from an informal, rehabilitative agency into a scaled-down second-class criminal court" (Feld, 1996, p. 418). Given the current focus on the punishment of young offenders and the lack of resources in juvenile courts, Feld argued that the United States should "abolish juvenile court jurisdiction over criminal conduct, try all offenders in criminal courts, and introduce certain procedural and substantive modifications to accommodate the youthfulness of younger offenders" (Feld, 1999, p. 289). All resources would be concentrated into an integrated criminal court system, and states could provide extra procedural safeguards for juvenile offenders. In addition, Feld suggested, an integrated court system should incorporate a youth discount—recognizing youthfulness as a mitigating factor—into sentencing decisions. Adolescents tried and convicted in an integrated criminal court still could be sentenced to separate placement in juvenile correctional facilities rather than adult prisons; only the courts would be combined.

An integrated court system might help reduce racial disproportionally and the double standard of juvenile

justice, two problems that have plagued the juvenile justice system since its inception. Even with sentencing guidelines in place in many jurisdictions, racial minorities continue to be overrepresented in secure confinement for their offenses, and girls continue to face a double standard of juvenile justice. Along with females' adolescent criminality, the moral conduct of girls has long been a concern of the larger community (Chesney-Lind & Shelden, 2004). Juvenile courts historically treated girls paternalistically: Girls were sanctioned more severely than boys for early sexual behavior and for disobeying their parents; in the early part of the 19th century they were institutionalized away from males, learning domestic skills until their release. The 1992 reauthorization of the JJDP Act focused attention on gender bias and called for more services to girls in the juvenile justice system, encouraging gender-specific programming.

While race, gender, and social class have always had at least an indirect impact on justice decisions, The U.S. system of juvenile corrections arguably has been becoming a two-tiered system: a state-run system for poor minorities and private facilities for children whose parents can afford alternative placements. In this emerging system, gender, race, and social class interact and lead to clear patterns of incarceration: White girls are more likely to be channeled into private facilities whereas girls of color are concentrated in state institutions (Chesney-Lind & Shelden, 2004).

## JUVENILE JUSTICE: IMPORTANCE IN ADOLESCENT DEVELOPMENT AND THE LIFE COURSE

Growing up is difficult in the best circumstances, and spending one's adolescent years in the juvenile justice system increases the problem immeasurably. The experiences adolescent inmates miss while incarcerated cannot be replaced; their teenage lives are part of the price they pay for their crimes. The boys and girls who enter juvenile correctional facilities often return to their communities as young women and men with little preparation but all the responsibilities of adulthood (Inderbitzin, 2006a).

Although incarceration appears to be a turning point for some offenders who "desist" from crime, for nearly all who pass through a correctional facility it adds to the cumulative disadvantage and the obstacles they will face after their release. Incarceration may weaken community bonds, contribute to school failure and unemployment, and ultimately increase the likelihood of committing adult crime (Laub & Sampson, 2003). Young adults returning to the community from juvenile institutions generally face the outside world with little to no money or savings, few marketable skills, and no history in the legitimate labor market to help their employment prospects. Many juvenile offenders have the advantage of being "adjudicated delinquent" rather than convicted of a felony, so they do not have to "check the box" on employment applications. They do, however, face the difficult task of explaining the gaps that accumulated during their incarceration in their education and work experience to prospective employers and college admissions officers. As L. Steinberg, H. L. Chung, and M. Little (2004) found: "Despite its putatively rehabilitative aims, it is all too often the case that young offenders finish their time with the justice system and move into the adult world with just as many, if not more, problems than when they first entered" (Steinberg, Chung, & Little, 2004, p. 23).

Although the juvenile justice system has become more punitive, many working in the system continue to search for a better way to address the needs of both delinquents and the community. In considering the state of juvenile justice at the turn of the 21st century, J. A. Butts and D. P. Mears (2001) argued that "get-tough policies weakened the integrity of the juvenile justice system, but growing evidence about the effectiveness of new ideas in prevention and rehabilitation may save the system yet" (Butts & Mears, 2001, p. 171). Consistent with the original philosophy of *parens patriae*, guiding the troubled young people in their care through "the immense journey of adolescence, a journey of peril and possibility" (Ayers, 1997, p. 138) remains an important goal for many people who work in the juvenile justice system. The perils are clear for delinquent youth; ideally, their experiences in the juvenile justice system will help them see the possibilities as well.

**SEE ALSO** Volume 1: *Crime, Criminal Activity in Childhood and Adolescence; Gangs; Theories of Deviance;* Volume 3: *Incarceration.*

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## KOHLBERG, LAWRENCE

SEE Volume 1: *Moral Development and Education.*

## LEARNING DISABILITY

The Learning Disabilities Association of America (2006) describes learning disabilities as "neurologically based processing problems. These processing problems can interfere with learning basic skills such as reading, writing, or math. They can also interfere with higher level skills such as organization, time planning, and abstract reasoning." The association estimates that 15% of the U.S. population has a learning disability of some kind and that 6% of the public school population receives special education support because of an identified learning disability. Definitions of learning disabilities in the United States and Canada all emphasize that it is an umbrella term that covers a wide range of difficulties and that these difficulties are not indicative of low intelligence or of lack of adequate instruction. Strictly speaking the term *specific learning disabilities* (U.S. Department of Education, 2004) should be used, which underscores the particular rather than generic nature of the cognitive processing difficulties assumed to lead to basic skills difficulties. The Individuals with Disabilities Education Act (IDEA) of 2004 specifies that an individual can be identified as having a learning disability only if their difficulty is not attributable to any of the following causes:

- a visual, hearing, or motor disability
- mental retardation
- emotional disturbance
- cultural factors
- environmental or economic disadvantage
- limited English proficiency

### MODELS AND TYPES OF LEARNING DISABILITY

Learning disabilities can be characterized either by difficulties with a specific skill such as reading (hence the term *reading disability*) or by the processing difficulties thought to underlie a particular skill, such as the phonological impairments that are at the heart of the majority of reading difficulties. Most estimates reveal that approximately 70–80% of children identified as having a learning disability are designated as having a reading disability. Other specific difficulties involve writing, mathematics, speech, and language, and also include dyspraxia (motor planning disorder), but beyond reading, writing, and mathematics what should be included or excluded is more debatable with differing opinions among leading authorities in the area. Critics such as Kavale (2005) have argued that the term *learning disabilities* now covers too broad a range of difficulties and in doing so renders itself too vague to be useful in practice. A complicating factor is that individuals may have more than one specific learning disability or have difficulties that do not fall into a single clear-cut category. Most would agree that learning disabilities represent a spectrum of difficulties, and the debate focuses on whether and how they should be divided into subcategories.

### CAUSES OF LEARNING DISABILITIES

The causes of learning disabilities are complex. In some cases several factors may interact to cause a difficulty,

whereas in other cases several different causes may lead to the same kind of basic skill difficulty. Studies of identical twins indicate that if one twin has difficulty with the phonological processing aspects of reading (detecting and manipulating the sounds in words), the other twin is also likely to have similar difficulties (Shaywitz & Shaywitz, 2003). Such studies suggest that genetic factors are implicated in a significant proportion of learning disabilities. For other children, by contrast, infections, traumas, or damage to the brain pre- or postnatal, during birth, or in early childhood are the likely cause. In all these instances the way in which the initial processing difficulties interact with the wider social and learning environment will affect the degree and manner in which they are expressed. A child with mild phonological processing difficulties may develop reasonably well with good reading support and high exposure to reading activities, whereas a child with identical difficulties but with poor reading support and little exposure to reading may struggle.

## READING DISABILITIES AND DYSLEXIA

Because of the central role of reading in children's learning and the apparent predominance of these difficulties, reading disabilities probably comprise the most intensively researched learning disability area. The problem of using a seemingly deficient skill as a label is that it can emphasize one skill—in this case, reading—and may draw attention away from the fact that most children with reading disabilities also have persistent problems with spelling, writing, and some aspects of arithmetic. Some prefer the term *dyslexia* because this suggests a syndrome with a range of interlinked difficulties with reading at the core. This allows one label to be used to summarize a range of specific difficulties rather than having to give an individual several labels. It also allows a developmental perspective to be taken, one acknowledging that different skills may be highlighted as problematic at different stages in an individual's learning.

Whereas some treat reading disabilities and dyslexia as synonymous, others argue that dyslexia is a major reading disability subcategory. The International Dyslexia Association (2007) provided the following definition of dyslexia:

> It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.

Such individuals often have relatively good reading comprehension skills in comparison to their reading fluency and accuracy skills, revealing that the problem is with the technical rather than the conceptual aspect of reading. Whereas many children with reading disabilities fit this description, some do not; for example, a child with comprehension difficulties but no phonological processing difficulties has a very different cognitive profile—one that would indicate a different course of intervention. Fletcher, Morris, and Lyon (2003) presented evidence that highlights the need to separate learning disabilities into subgroups based on different processing difficulties. The advantage of this approach is that a much clearer understanding of why some children are struggling with particular skills can be gained. In the case of dyslexia this led to a considerable body of research on the difficulties such children have in detecting the sounds (phonemes) that make up words (Snowling, 2000) and in developing effective interventions to address these difficulties. Researchers are also focusing on the role of the magnocellular system in the phonological, visual, and timing aspects of reading.

## IDENTIFICATION OF LEARNING DISABILITIES

A combination of approaches can be used to identify all learning disabilities, including specific tests of the basic skill in question, tests designed to identify the underlying processing difficulties, case histories and observations of the child, and noting the child's responses to specific interventions. According to the U.S. National Center for Health Statistics survey, 8% of children between the ages of 3 and 17 (10% of boys and 6% of girls) had a learning disability (Bloom & Cohen, 2006). The survey also reported that twice as many children (12%) from poor economic backgrounds as compared to economically well-off backgrounds (6%) were identified as having a learning disability. Some claim that girls are underidentified as having a learning disability in comparison with boys (Fletcher, Lyon, Fuchs, & Barnes, 2007), possibly because they internalize rather than act out their feelings in response to learning difficulties and are therefore less likely to be noticed and subsequently diagnosed. Although there may be some truth to this, others argue that there are sound biological reasons (linked to genetics) that account for the predominance of boys in the learning disability category (Rutter et al., 2004).

Past definitions of learning disability stressed the discrepancy between children's general intelligence and their unexpected difficulty with specific skills such as basic literacy. Critics point out that definitions of this sort could discriminate against less able and less socially advantaged children, for whom such discrepancies may be less obvious (Vaughn & Fuchs, 2003). For this reason the IDEA stipulates that a severe discrepancy between achievement and intellectual ability is not required to identify a child as having a learning disability. Vaughn

and Fuchs suggest that an alternative criterion for specific learning disabilities should be response to intervention. This is based on the argument that children with specific learning disabilities fail to respond at the same rate as other children to specific and well-structured reading programs. Although there is considerable interest in this approach, it does have serious limitations. Who is to decide what counts as lack of response to intervention, and precisely what kind of intervention at what particular age? Others argue that tests of basic skills and underlying processing difficulties should continue to be refined and improved to create clearer cognitive profiles that can inform interventions. The ideal for all approaches is to identify children before they have "failed" in the school system so that appropriate interventions can be put in place to prevent failure from arising, particularly because the specific information-processing difficulties underlying learning disabilities are considered to be lifelong. The hope is that targeted interventions can be used to improve or create alternative processing strengths through which persons with learning disabilities can develop adequate basic skills.

## IMPACT OF LEARNING DISABILITIES

An issue for all learning disabilities is distinguishing between the primary processing and basic skill difficulties that an individual has and the possible secondary difficulties that can arise as a consequence. In the case of reading disabilities, it is well documented that children who struggle with reading end up reading considerably less than children who are competent readers; thus, lack of practice exacerbates their slow reading development. Individuals with learning disabilities report a range of personal reactions to their difficulties including shame, guilt, anger, and frustration, especially in situations in which they feel their difficulties are not understood. A number of studies have reported that children and adult students with learning disabilities, reading disabilities, and/or dyslexia have lower self-esteem and self-efficacy than their peers (Riddick, 1996). With improvements in identification, interventions, attitudes, and environmental accommodations, such findings should become less common.

Cognitive approaches to understanding learning disabilities and particularly reading disabilities have been very helpful in suggesting specific forms of intervention, but they have their limitations. One is that many children with severe reading disabilities (or dyslexia) still have considerable difficulties with spelling and writing and poorer reading fluency and accuracy than the general population, despite improvements in their reading. Another difficulty is that these processing models tend to focus on individual deficits and how they should be fixed rather than on challenging or questioning the environment within which individuals with learning disabilities must function. From a social model of disability perspective, it can be argued, for example, that reading disabilities are exacerbated by the fact that written language is the main medium through which school education takes place.

Research has demonstrated that there is a gradient of language difficulty, with English being the most difficult to read and write because of the disjunction between how it is written and spoken. Words such as *yacht* or *colonel* are highly irregular, and many words are not phonologically transparent in that they are not written the way they sound. It is estimated that phonologically transparent languages such as Italian, in which nearly all words are written the way they sound, present only half the difficulty of English for children who have phonological processing problems (Seymour, Aro, & Erskine, 2003). It can be argued that English is a disabling language for some children and that in a genuinely inclusive culture English would be reformed to make it simpler to read and spell.

The importance of early, appropriate, and well-targeted intervention for learning disabilities cannot be underestimated, but for children and adults with persistent difficulties the environment also needs to change. This can be seen as part of the wider philosophy of inclusion in which it is recommended that organizations adapt to meet the needs of individuals rather than expecting the individual to fit into the organization's preexisting approach to education or work. More specifically, there is interest in the development of dyslexia-friendly schools and colleges where in addition to individual interventions a number of changes are made in classroom practices and school policies and organization (British Dyslexia Association, 2005; Riddick, 2006). For adults the Americans with Disabilities Act of 1990 stipulates that employers must make reasonable accommodations for individuals with disabilities in the workplace.

A national survey in Canada has compared the life experiences of people with and without learning disabilities at various ages (Learning Disabilities Association of Canada, 2007). Adults with learning disabilities left school with poorer qualifications, they were less likely to work, those who worked earned less, and they were two to three times as likely to report poor physical or mental health. This reinforces a number of previous findings showing that adults with learning disabilities fare less well as a group than those without learning disabilities. Poor basic skills at school appear to lead to fewer educational qualifications, and these in combination lead to fewer employment opportunities and the

risks associated with a low income or unemployment. This pathway is not inevitable, and many examples exist of adults with learning disabilities who have been very successful.

In his seminal research on disability and stigma, Goffman (1963) distinguished between what he called evident and not-evident disabilities. A difficulty with not-evident disabilities such as learning disabilities is that the wrong reasons can be ascribed to why an individual is behaving in a certain way. The classic case has been with poor reading and spelling, which have been attributed to carelessness, laziness, or lack of intelligence. Although some have questioned the use of labels, arguing that they are stigmatizing and focus on individuals' deficits, a counterargument has been that they allow for better understanding of individuals' difficulties and legitimize the reasons why they are struggling with a skill such as reading (Riddick, 1996, 2001). In addition, it is only when learning disabilities are recognized and acknowledged as legitimate that individuals with such difficulties can criticize environmental conditions that exacerbate their difficulties or create barriers for them.

**SEE ALSO** Volume 1: *Academic Achievement; Attention Deficit/Hyperactivity Disorder (ADHD); Autism; Cognitive Ability; Disability, Childhood and Adolescence; Gender and Education.*

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***Barbara Riddick***

## LONELINESS, CHILDHOOD AND ADOLESCENCE

**SEE** Volume 1: *Friendship, Childhood and Adolescence; Mental Health, Childhood and Adolescence.*

# M

## MATERNAL EMPLOYMENT

In the United States, the labor force participation rate of mothers with children under the age of 18 increased dramatically from 47% in 1975 to 71% in 2006. This rise was particularly sharp for mothers with children under the age of 3, increasing from 34% to 60%. The corresponding figures for mothers with children between ages 3 and 5 are from 45% to 68% and for mothers with children between 6 and 17, 55% to 77% (see Figure 1). Consequently, as many as two-thirds of infants and toddlers received some kind of nonmaternal child care in 2006 (U.S. Bureau of the Census, 2007). These trends are changing family life in significant ways, and increasing attention is being paid to how maternal employment affects child well-being.

### THEORETICAL PERSPECTIVES ON MATERNAL EMPLOYMENT AND CHILDREN'S OUTCOMES

To understand how parental employment might impact children's outcomes, it is first necessary to understand child development and its influencing factors (Bornstein, 2002; Bronfenbrenner, 2005). Theorists from a variety of disciplines have underscored the importance of the parent–child relationship in developing trust and a sense of self. Parents are also invaluable in helping children understand and express language, develop a variety of skills, and solve cognitive tasks. Furthermore, parents aid in the development of children's emotional capacities, such as regulating emotions, dealing positively with frustration, and delaying gratification. Building on this base, psychologists, sociologists, and economists have provided insights into the relationship between maternal employment and child outcomes.

**Theory from Psychology** Psychological theories of child development generally assume the mother is the primary caregiver. As women increasingly entered the labor force, theorists began to speculate about how this might affect children's development.

The effects of maternal employment are believed to fluctuate over the child's life course. For example, mothers working in the early life course of children's lives were first seen as potentially detrimental to attachment and the mother–child relationship (see review in Belsky, 2001). For instance, one theory argued that working mothers may be more fatigued and less sensitive to their children, thus interfering with children's secure attachment. Early empirical studies, however, found mixed results, most likely because of small sample sizes. More recently, studies have used a longitudinal data set, the NICHD Study of Early Child Care and Youth Development (NICHD SECCYD), to indirectly examine this issue through the use of nonmaternal child care and have generally found negative impacts on attachment only for children who spend a great deal of time in such care and return home to less sensitive mothers. Nevertheless, direct analyses of maternal employment are needed to more accurately examine the effects of maternal employment on attachment.

Scholars have also suggested that maternal employment could negatively affect the quality of the home environment, maternal sensitivity and responsiveness, and the amount of cognitive stimulation offered to

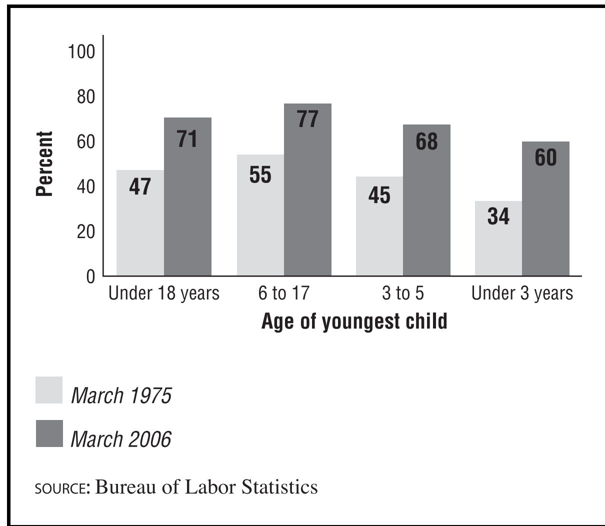


***Figure 1.*** *Labor force participation rates have increased dramatically among mothers over the past 31 years.* CENGAGE LEARNING, GALE.

children (e.g., talking to, playing with the child), or increase the risk of placing their children in poor quality care (Belsky, 2001). It is also possible of course that working mothers might provide higher quality parenting and home environments, or might place their children in care that benefited their development. There is, however, little empirical evidence to support or reject any of these hypotheses. Another hypothesis is that working mothers may experience stress when balancing work and family responsibilities and as a result use harsher parenting tactics. However, a number of small studies of working mothers who had recently exited welfare have generally found no effects in this regard (Chase-Lansdale et al., 2003). Yet another concern is that working mothers may spend less time with their children, and reduced time may mean less intellectual or emotional stimulation. An analysis of NICHD SECCYD data found that working mothers did spend less time with their infants and appeared to provide poorer quality home environments (but not less sensitivity; Huston & Rosenkrantz Aronson, 2005).

These mixed effects may be due to the diversity of families of working mothers, and thus a more nuanced analysis of the impacts of maternal employment on child outcomes is necessary. For instance, theorists suggest that child temperament might moderate such relationships (Damon, Lerner, & Eisenberg, 2006). Additionally, child gender has been found to explain some of maternal employment's effects on externalizing behavior problems such as aggression or hyperactivity. Other potential moderating factors may be the quality and complexity of the mother's job (Bianchi, Casper, & King, 2005) and, given that childrearing practices are heavily culturally dependent, the mother's racial or ethnic group membership (Damon et al., 2006). For instance, maternal employment may be viewed as more normal and acceptable in communities in which mothers have historically participated in the workforce, such as the African American community. Indeed, researchers have long noted the greater involvement of kin in the rearing of African American children, and thus the impact of mothers going to work may be less for families that are already accustomed to sharing care responsibilities.

**Theory from Sociology** Sociologists emphasize the important role that environmental factors in the home and work spheres play in child development and how such influences vary across individuals and families (Bianchi et al., 2005). Similar to the role strain and spillover theories developed by psychologists (which emphasize the potential of parents bringing work stress home that may spill over on the family and home environment and in turn affect children's well-being), sociologists have also outlined how home and work roles may complement or conflict with one another (Presser, 2003). For instance, positive work experiences may help a parent be more relaxed and responsive at home, whereas negative or draining work experiences may do the opposite. Together, therefore, both psychologists and sociologists point to the critical role played by moderating factors, whether at the level of child, family, or parental job.

**Theory from Economics** Economic perspectives complement those from psychology and sociology (Bianchi et al., 2005). First, theorists have noted the benefits of having one parent work and the other parent manage the home to avoid breaks in employment and part-time schedules that are usually penalized in the labor market (Bianchi et al., 2005). This suggests that there will be trade-offs involved in decisions to work or not work in the labor market or to work full-time versus part-time. Second, parental employment may have positive (e.g., increased income/resources), negative (e.g., overburdened parents, heavy reliance on nonparental child care), or neutral effects on children's health and development (Bianchi et al., 2005). This point is crucial as it suggests the importance of considering the role of key mediators such as income, the home environment, and the quality of parenting and nonmaternal child care. Third, early investments in children may lead to more positive development and learning over time. Economic theory, like psychological theory, thus suggests that the effects of maternal employment persist over time and points to the importance of conducting longitudinal analyses.

## RESEARCH ON MATERNAL EMPLOYMENT AND CHILDREN'S OUTCOMES

Generally drawing on the National Longitudinal Survey of Youth–Child Supplement (NLSY–CS), studies of the relationship between maternal employment and infant/toddler outcomes have uncovered positive associations, negative associations, and important moderating factors such as child gender and the timing and amount of employment in the child's early years. Some NLSY–CS analyses have found negative associations between full-time maternal employment in the first year of a child's life and child cognitive outcomes up to age 8 (see review in Brooks-Gunn, Han, & Waldfogel, 2002). Additionally, a study using early NICHD SECCYD data found a negative relationship between full-time maternal employment during the child's first year and children's school readiness at age 3 (Brooks-Gunn et al., 2002). A follow-up study that considered several mediating factors found negative relationships with cognitive outcomes from age 3 up to the first grade, that the effect was partially explained by the mother's earnings and the use of center-based care, that lower maternal sensitivity and low-quality home environments helped explain the poorer cognitive outcomes, and that negative associations were stronger for mothers with nonprofessional as opposed to professional jobs. In all of the above-mentioned studies, however, the significant effects applied only to non-Hispanic White children.

Early studies of NLSY–CS data also found negative associations between maternal employment in the child's first two years and problem behaviors during the preschool and school-age years. Some studies, however, have found fewer early behavioral problems and greater compliance for 2-year-olds (see review in Belsky, 2001).

Moreover, several studies have looked at the relationship between parental work schedules and children's outcomes. For instance, one qualitative study found that school-age children had lower math scores if their parents worked evenings and higher school suspension rates if their parents worked nights (Heymann, 2000). In other studies, parents reported that their nonstandard schedules (e.g., early mornings, evenings, nights, or variable hours) interfered with their being able to help their school-age children with homework or participate in after-school activities (Heymann, 2000). Similarly, an analysis of national data revealed lower interest and less willingness to do schoolwork for 6- to 11-year-old children whose parents worked nonstandard hours (see review in Han, 2007).

With respect to socioemotional outcomes, an analysis of NLSY–CS data indicated that nonstandard schedules were related to poorer behavioral outcomes for 4- to 10-year-old children, especially if their mothers were single, receiving welfare, earning a low income, working as a cashier or in some other service-sector occupation, or working a nonstandard shift full-time (Han, 2007). Children whose mothers and fathers both worked full-time, nonstandard shifts had the most behavioral problems of all (Han, 2007). Studies from Canada have also found a negative relationship between parental nonstandard shifts and school-age children's engagement in property offenses and that parental depression and ineffective parenting behaviors partially explained this finding (see review in Han, 2007).

In sum, early 21st century research indicates that maternal employment during the child's early years, particularly the first year, has some negative effects on cognitive, social, and emotional development during the preschool and possibly the early school years. It is not clear, however, whether these effects last into adolescence or "fade out" over time. In addition, it is important to understand whether there is any link between contemporaneous maternal employment and adolescents' well-being. The next section summarizes this line of research.

## MATERNAL EMPLOYMENT AND ADOLESCENTS' OUTCOMES

Adolescence presents children with biological, psychological, and social challenges that can be resolved positively or, if their developmental needs are not met at home and/or school, can lead to negative developmental trajectories (Eccles & Gootman, 2002). Accordingly, adults, especially parents, continue to play guiding roles throughout the teenage years (Eccles & Gootman, 2002). Indeed, adolescents tend to fare better on a range of outcomes when they have open and intimate relationships with their parents, spend more time with them, receive more supervision, and have parents who are more aware of their activities and whereabouts. Unsupervised time with peers is especially problematic when the peers themselves engage in problematic behaviors, when parental monitoring is low, or when the parent–child relationship is poor.

Parents' abilities to provide monitoring and foster healthy relationships with their children are affected by a number of factors, one of them being how their work demands fit with family responsibilities. Psychological theory (e.g., Belsky, 2001; Bronfenbrenner, 2005) and the research on work–family balance (e.g., Presser, 2003) both stress the importance of positive relationships with the home and surrounding environments in fostering positive child development. Economic and sociological theories also point to the significance of income and parent–child relationships in developing adolescents' human, cultural, and social capital. To the extent that employment reduces parent–child contact and parents' physical and emotional energy, they may be less able to

nurture their children's development (Heymann, 2000). This discussion suggests that the impact of parental employment may depend on how it affects the time parents have for their children, the quality of the adolescent–parent relationship and the home environment, and the financial resources available to the family. Certainly, parental employment can have benefits, such as greater family resources and reduced financial stress, but longer hours may make it difficult for parents to talk with, monitor, or spend time with their children. These factors make it difficult to predict the effects of parental employment.

## PRIOR RESEARCH ON THE RELATIONSHIP BETWEEN PARENTAL EMPLOYMENT AND ADOLESCENT OUTCOMES

A series of experimental studies of welfare-to-work programs by the Manpower Demonstration Research Corporation found some negative effects of maternal employment on achievement and school behavior for adolescents (Gennetian et al., 2002). For instance, adolescents with younger siblings were more likely to be babysitting or working than enrolled in after-school activities, and these same adolescents experienced lower grades, more special education services, and higher expulsion and dropout rates. It has been suggested that taking on adult responsibilities may have some negative ramifications for adolescents' continued development (Bianchi et al., 2005). The results on the behavioral outcomes were mixed (Gennetian et al., 2002). Only two of the six studies found significant results on behavioral outcomes (Gennetian et al., 2002), but maternal employment led to increased drinking and minor (but not major) delinquent activity such as skipping school and increased police involvement.

Most observational studies on the links between maternal employment and adolescent outcomes have focused on middle-income, dual-earner families and have tended to find no significant associations with behavioral problems, social adjustment, drug or alcohol use, or early sexual activity. Effects on school achievement are rare, but some studies have found poorer outcomes for boys (but not girls). One analysis of low-income families from the so-called Three-City Study of welfare reform found that adolescents whose mothers shifted from welfare to work showed improved mental health, especially lessened anxiety (Chase-Lansdale et al., 2003).

A more recent study investigated the long-term effects of early maternal employment and found that children in low-income families had higher verbal, mathematics, and reading test scores in adolescence if their mothers had worked part-time rather than full-time in their infant and toddler years (Ruhm, 2006). Relatively advantaged children (e.g., non-Hispanic White, higher socioeconomic status, college-educated mothers, mothers married at child's birth), however, had poorer cognitive outcomes and an increased risk of obesity in the preadolescent years. In contrast, an earlier study found few long-term effects of early maternal employment on adolescent's risky behaviors such as engaging in sex, crime, and alcohol, cigarette, or substance use.

Another study used the NLSY–CS to examine how adolescents' outcomes were related to parents' current work schedules. For single-mother families, rotating shifts were strongly related to increases in adolescents' delinquent behavior, whereas for two-parent families, mothers' and fathers' nonstandard work schedules were correlated with more parental monitoring but less adolescent–parent closeness. Another study found lower father monitoring and adolescent–parent closeness with both parents when fathers worked nonstandard hours but increased adolescent–mother closeness when only mothers worked nonstandard hours. The mixed findings on adolescent–parent closeness may be explained by how parents' work shifts affect their ability to spend time with their children, such as having dinner with them or helping them with their homework (see review in Han, 2007, for above studies).

## AVENUES FOR FUTURE RESEARCH

Both theory and research point to complex links between maternal employment and child and adolescent outcomes, operating through such factors as the home environment, child care, the family's economic resources, and child and maternal characteristics. However, there is still much to learn about these relationships, and fine-grained analyses are needed to adequately explain them. Given the existing research and that a greater number of fathers are participating in child-rearing and household responsibilities, future studies should consider the role that maternal employment plays within the family's division of work and child-care responsibilities. In other words, mothers may work a given shift for a given number of hours in order to increase the family income, to provide more care for their children, or for a number of other reasons. Additionally, considering family members' employment patterns together will provide a better understanding of the father's role in children's development.

Furthermore, more needs to be learned about the changes that arise in the home environment when parents work full- or part-time. In this regard, analyses using time-use data for both parents would be particularly important.

Finally, future research should also consider how the nature, type, and quality of the job (such as flexibility, job satisfaction, and work schedules) affect family

dynamics and children's outcomes. In addition, little is known about how mothers make decisions about their employment in the child's first year, and how such decisions relate to the flexibility and financial support received through their jobs. Mothers in the United States have fewer choices than mothers in Canada and many European countries, which offer more governmental financial support to mothers in the early years of a child's life and more subsidized child care to families during the preschool years. Given that long-standing research has shown that longer paid parental leave can improve child health by reducing infant mortality and by leading to more well-baby health care, such research could have very important policy implications given the lack of paid parental leave and subsidized child care offered to parents in the United States.

**SEE ALSO** Volume 1: *Attachment Theory; Child Care and Early Education; Parent-Child Relationships, Childhood and Adolescence; Parenting Style; Poverty, Childhood and Adolescence; Socialization, Gender;* Volume 2: *Gender in the Workplace.*

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***Wen-Jui Han***

# MEAD, MARGARET

### *1901–1978*

Anthropologist Margaret Mead was born in Philadelphia, Pennsylvania, on December 16. The eldest of five children (four of whom lived to adulthood) of sociologist Emily Fogg Mead (1871–1950) and economist Edward Sherwood Mead (1874–1956), she first became interested in childhood development by learning to observe her siblings, as her mother and grandmother, a teacher, had observed her. This interest continued throughout her life.

Margaret Mead became well known as a pioneering social scientist while still in her 20s, with her earliest work devoted to the cultural and psychological aspects of childhood and adolescence. She paid particular concern to the ways in which children learn to be members of their cultures.

Mead studied children's thought and enculturation and how an individual's development intersected with and was shaped by cultural emphases on particular temperamental traits. Along with her mentor and friend, anthropologist Ruth Benedict (1887–1948), Mead was a prominent popularizer of anthropology in the United States. Both she and Benedict were associated with the *culture and personality* approach to anthropology.

Mead studied the children of seven cultures in the South Pacific and Indonesia intensively in the 1920s and 1930s. She also studied children in the United States, including her own daughter (Mary Catherine Bateson,

born 1939) and granddaughter (Sevanne Margaret Kassarjian, born 1969).

By the post–World War II (1939–1945) years, Mead had switched much of her focus from preliterate cultures to American culture, and she was quoted extensively as an expert on youth culture and the *generation gap* in the 1960s and 1970s, publishing *Culture and Commitment: A Study of the Generation Gap* in 1970.

Using varied—and often groundbreaking—methods, Mead explored the role of culture in personality formation by observing children in various environments. Some of the methods she used by herself, or in collaboration with others, were observation and note-taking; interviewing; photography (still and moving picture); psychological testing (including standardized intelligence tests); and the collection of children's drawings from the study participants. The use of these methods culminated in a collaborative project with her third husband, Gregory Bateson (1904–1980), and other colleagues, in Bali between 1936 and 1939.

Mead earned her master's degree in psychology in 1924, and the research for her master's thesis examined the effect of culture on the intelligence test scores of Italian immigrant children in Hammonton, New Jersey. She used similar psychological testing materials to investigate the thought of girls in American Samoa on her first anthropological field trip in 1925 and 1926. Mead's professor, Franz Boas (1858–1942), known as the father of modern American anthropology, thought she was particularly well equipped to investigate the degree to which adolescence was culturally determined rather than a universal given. Granville Stanley Hall (1844–1924) had argued in his work, *Adolescence* (1904), that adolescence was a time universally marked by ''storm and stress.''

In 1928 William Morrow (d. 1931) published Mead's first book, *Coming of Age in Samoa*, a study of adolescent girls in Samoa and the implications of their experiences for American education. Mead found that the emphases of Samoan culture led to adolescent girls having a carefree experience of sexuality; it lacked the turbulence of adolescence expected in Western culture.

Although *Coming of Age* brought Mead rapid fame, other researchers over the years disagreed to varying degrees with her findings. The most prominent of these, New Zealand–born Australian anthropologist Derek Freeman (1916–2001), first publicly took on Mead after her death in *Margaret Mead and Samoa: The Making and Unmaking of an Anthropological Myth* (1983). The resulting debate over field methods and the respective roles of nature and nurture is often referred to as the *Mead–Freeman controversy*. The controversy was never definitively resolved, in part because Freeman's work in Samoa, on which his conclusions were based, had been conducted in a different area and time period than Mead's.

MARGARET MEAD. AP IMAGES.

On Mead's second field trip in 1928 and 1929—to the Manus (or Admiralty) Islands (now part of Papua New Guinea)—with her second husband, Reo Fortune (1903–1979), she investigated the thought of the children through various methods, most prominently through collecting their drawings but also through such projective testing methods as inkblot tests. Mead collected approximately 35,000 children's drawings in Manus and did not find evidence of spontaneous animism (the attribution of spiritual qualities to objects) in their depictions of the world, though Swiss psychologist Jean Piaget (1896–1980) had argued that animism was a universal feature in the development of children's thought. The lack of animism among Manus children was especially striking given a heavy emphasis on the supernatural in the adult Manus culture. Mead continued to collect children's drawings in most of the other cultures she studied, including several return visits to Manus in the post–World War II years.

In the 1950s, Mead and her colleague, Rhoda Metraux (1914–2003), collected drawings from American children depicting images of scientists and from American and Balinese children depicting a Sputnik Soviet satellite. In the postatomic world, Mead felt that children knew more about living in the time of rapid social change than did their parents, in contrast with an older, more slowly changing type of society.

A major figure in American anthropology—especially in the areas of culture and personality, gender, and child development—Mead kept detailed and voluminous notes on her work and that of her colleagues, including those who worked extensively in childhood development, and those papers have been preserved in the Manuscript Division of the Library of Congress for scholarly reference.

**SEE ALSO** Volume 1: *Puberty; Sexual Activity, Adolescent; Youth Culture.*

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***Patricia A. Francis***

# MEDIA AND TECHNOLOGY USE, CHILDHOOD AND ADOLESCENCE

It becomes more and more evident with each generation that young people's media use is more than simple entertainment; it provides them with tools for understanding their world, for presenting their own personality, and for escape and distraction. In the past, when television was the only electronic, audiovisual media in the home, children's and adolescents' media use was a purely receptive experience. Their involvement with the medium was limited to responding to the onscreen content and turning the channel. The world they witnessed was one they could not interact with or influence. In the media environment of the early 21st century, this is far from the case. Modern Internet applications and inexpensive consumer electronics have merged the roles of producer and consumer so that young people create, shape, and own parts of their media environment.

Broadcast and mass-appeal media content, however, is still very much a part of the lives of children and adolescents. On any given day, a young person in the United States is likely to watch television, play video games, use the Internet, listen to music, talk on the phone, and use numerous other forms of electronic media and technology. All of these activities have the potential to influence them in numerous and varied ways. Television and movies can expose young people to violent behavioral options and frightening images or to multiple worldviews and valuable information. Aspects of the Internet can help young people connect with friends, learn about hobbies, and volunteer, or they can be used to harass schoolmates, illegally acquire software, and gamble. All these are tools for young people, and their overall impacts on their lives are determined by how they are used. Understanding these outcomes, therefore, starts with understanding patterns and differences in usage across groups of young people.

## PATTERNS OF MEDIA USE

On average, young people aged 8 to 18 spend 6 hours and 21 minutes per day using media (Roberts, Foehr, & Rideout, 2005). Use is primarily composed of electronic media, including 3 hours and 4 minutes of television, 49 minutes of video games, 1 hour and 2 minutes of computers, and 1 hour and 44 minutes of music. Young people also spend 43 minutes per day with leisure time print media. Each type of media use, however, does not occur independently of the others. Portable music players, wireless Internet routers, handheld video game units, and other similar technology allows users to participate in numerous mediated activities at one time. When this type of use, known as multitasking, is considered, young people are exposed to 8 hours and 33 minutes of media per day.

**Television Viewing** Age is a strong predictor of the amount of television children and adolescents view. As very young children age, they show a fairly consistent increase in television viewing until age 3 after which use remains fairly constant. At the age of school entry, typically age 6, weekday viewing decreases slightly and is met with an increase in weekend viewing (Wright et al., 2001). The amount of viewing is fairly level from ages 8 to 14 (approximately 3

***Guitar Hero.*** *Boy plays Guitar Hero video game.* AP IMAGES.

hours and 15 minutes per day [Roberts et al., 2005]), with some studies finding a peak around age 12 (Comstock, Chaffee, Katzman, McCombs, & Roberts, 1978). Upon entry into high school, television viewing tends to decrease as social and school activities take on higher priorities in the lives of young people.

Gender does not differentiate the amount of viewing, as boys and girls tend to watch similar amounts of television. There are differences, however, in what is watched by gender: Girls are heavier viewers of comedy, whereas boys watch more sports, noneducational cartoons, and fantasy programming (Wright et al., 2001).

Ethnicity and socioeconomic status are both predictors of viewing. African Americans tend to watch the most television, followed by Hispanic Americans and European Americans. Lower levels of income and parental education tend to be associated with more viewing. While these variables are highly related to each other, economic indicators predict television viewing within each group (Bickham et al., 2003).

**Interactive Media** Video game play and computer use show opposite relationships with age. As young people progress through childhood and into adolescence, their video game play reduces while their nongame computer use increases (Roberts et al., 2005). Gender differences also exist in use of these media. Boys spend more time playing video games than girls (1 hour 12 minutes versus 25 minutes a day), whereas girls spend slightly more time using the computer.

As young people age, they spend more time using the computer for instant messaging, e-mailing, and visiting Web sites. Some studies show small differences in Internet use between the genders with girls spending slightly more time e-mailing, instant messaging, and visiting Web sites (Roberts et al., 2005). Other research has found no gender differences with these activities

(Gross, 2004). As these media continue to change in form and popularity, it is likely that these time estimates and differences will change as well.

## EARLY MEDIA USE RESEARCH: TELEVISION AND OTHER ACTIVITIES

While the newer forms of media are unique in many ways, the existing research on television is relevant to understanding media's influences on young people in the early 21st century for at least two reasons: (a) television continues to be the medium that is used most by children and adolescents and (b) numerous aspects of the theoretical explanations for television's influence on development are applicable to newer media.

In the 1950s as television spread throughout U.S. households, it was met with concerns about how its presence would impact young people. Critics of the medium painted a picture of a fractured family where dinner conversations, homework, and other productive pursuits give way to hours of time in front of the screen. Researchers interested in exploring the effects of the introduction of television on individuals, families, and communities had to move very quickly, and many focused on remote areas of the United States and other countries that received television later in its adoption. These are some of the most effective and unique studies to answer the question of how media impact individuals' everyday lives.

One of the most influential studies to examine the introduction of television into a region was conducted in the Canadian mountains where towns geographically close to each other received various amounts of television (Williams, 1986). Data were collected before one town received television and again 2 years after television was available. With the introduction of television, children attended fewer community activities and adults attended fewer social clubs and activities. Young people did not reduce their participation in youth-oriented social organizations. While television may have replaced some out-of-home activities, those that served important functions (such as social events for adolescents) were less likely to be affected.

In a study in South Africa that examined the effects of the introduction of television, researchers found that television mainly displaced other types of media such as radio and movies (Mutz, Roberts, & van Vuuren, 1993). A study performed in the 1950s found that young adolescents (6th to 10th graders) in communities with television spent less time listening to the radio, going to movies, and reading comic books than their peers with no access to the medium (Schramm, Lyle, & Parker, 1961). Overall, these studies point to the same general conclusion: Television is a force that restructures young people's free time but tends not to greatly influence activities that serve a more important function than occupying unscheduled time.

**Displacement** These naturalistic studies explored how television may replace other activities. This relationship, known as displacement, plays a central role in many of the concerns that media are detrimental for young people. For example, the use of media could potentially be linked to obesity, poor school performance, and underdeveloped language skills by replacing physical activities, homework, and reading. Many findings from the large naturalistic studies as well as other investigations show limited support for such dramatic displacement by television and other media.

While not fully conclusive, a number of research studies do support the notion that television viewing is related to lower levels of reading achievement (Beentjes & van der Voort, 1988). One potential explanation for this relationship is the displacement of book reading by television viewing. Whereas some studies have found a negative relationship between TV viewing and reading (Koolstra & van der Voort, 1996), others have not (Vandewater, Bickham, & Lee, 2006). Similarly, there are mixed findings concerning whether or not reading increases when an intervention reduces children's television viewing (Gadberry, 1980; Robinson & Borzekowski, 2006). Given these inconsistent and complex findings, an explanation as simple as television displacing reading appears insufficient. Almost certainly, individual family characteristics apart from electronic media availability play a role in determining whether or not a child is a heavy reader.

Similarly, the relationship between television viewing and obesity is more complex than it might initially appear. As indicated by various studies, the more television young people watch, the more likely they are to be overweight (Dietz & Gortmaker, 1985; Rey-López, Vicente-Rodríguez, Biosca, & Moreno, 2008). Additionally, successful media reduction campaigns have been shown to have positive, healthy effects on children's body mass index. It does not appear, however, that screen use and exercise have a simple time-exchange relationship; the reduction of media use does not correspond to an increase in physical activity (Robinson, 2000). Again, displacement is not sophisticated enough to explain fully how television influences young people's weight status. Two other mechanisms have been put forth to explain this relationship: (a) Seeing advertisements for unhealthy foods encourages poor nutritional choices (Dixon, Scully, Wakefield, White, & Crawford, 2007), and (b) children eat more and worse foods while they watch television (Matheson, Killen, Wang, Varady, & Robinson, 2004). More research is still necessary to further reveal the process through which television viewing and other screen media can influence weight status.

**Uses and Gratifications** The time-exchange of displacement may explain the relationship between media and some other activities, but it does not provide a theoretical structure for understanding why young people use media. The uses and gratifications approach, a theoretical perspective exploring the motivations that drive media use, focuses on the functions that media serve for their users. Individuals are seen as involved participants in media use who make active choices that are motivated by their specific needs.

In terms of television viewing, the main gratifications associated with its use are escape and avoidance, with information seeking also occasionally being mentioned. Similar functions are served by video games, with boys listing as their primary reasons for using the medium as fun, excitement, and the challenge of figuring out the game (Olson et al., 2007). When media meet similar goals, users, according to this approach, will choose one over the other. Take, for example, the desire to learn about the weather. An individual could turn to television, the Internet, the newspaper, or other media sources for this information, but he or she is unlikely to seek more than one.

The Internet serves specific functions that many other media are incapable of fulfilling. While young people go online for many reasons, socializing and connecting with friends is a primary one (Borzekowski, 2006). Uses and gratifications would predict that this behavior might replace telephone use because it serves a similar function, but it is also possible that online interactions could replace actual face-to-face interactions (Kraut et al., 1998). Given the broad spectrum of uses available on the Internet and of motivations for these uses, this approach may be in a unique position to help researchers study and understand how and why young people spend their time online.

**Cultivation** While the uses and gratifications theory addresses the motivations behind media use, the cultivation theory posits that viewing television contributes to users' perception and development of social reality (Gerbner, Gross, Morgan, & Signorielli, 1994). The social universe portrayed on television is a limited and consistent one that uses recurrent images and messages to convey stereotypical ideas about topics ranging from violence to gender roles. These characteristics are common across all types of programming. Young people who spend more time with the medium will have a world perspective and a belief system that more closely resembles the world as it is presented on television.

Explorations into the cultivation paradigm tend to use survey methodology because they are attempting to illustrate that widespread beliefs about society are linked to television viewing. Results have fairly consistently supported this perspective, with heavy viewers conceiving of the world as a scary, dangerous place and holding racial and gender stereotypes that are consistent with those presented on television. Television viewing has been found to shape an exceptionally broad spectrum of world beliefs. For example, dramas and situational comedies often depict sexual relationships as casual and risk free. Frequent viewers, therefore, are likely to hold more permissive views about sex. Similarly, the popularity of crime shows such as *Law and Order* overrepresent the number of police officers, judges, and lawyers in society. Frequent viewers of these types of programs believe that such occupations are more common than they actually are.

This approach has been met with some criticism. By considering the content of television as monolithic and homogenous, this approach does not address the specific impact of watching certain types of programming. Viewing violent content on television, for example, has been consistently linked to aggressive thoughts and behaviors. Proponents of this perspective argue that the pre- and post-viewing testing methodology of media effects research does not capture the lifelong experience with television or the role it plays in the overall development of individuals' social understanding.

## CURRENT ISSUES IN THE AREA OF MEDIA USE

Since the late 1980s, shifts in the media landscape have brought new issues to the forefront of parents' and researchers' minds. Dramatic structural changes in the space media occupy in homes as well as the types of new media available to families contribute to the modern role that media play in the lives of young people. What had once been seen as an occasional entertaining diversion is now a major presence in the home and is often used to occupy, inform, and socialize even very young children.

**Media in the Bedroom** With the advent of television, sets were expensive and families had one located in a central location of their house. As prices fell, working televisions were replaced by newer models and moved to more private parts of the home. In the early 21st century, it is more common for a family to have three or more televisions than to have one television, and approximately 68% of children aged 8 to 18 have one in their bedroom (Roberts et al., 2005). Furthermore, 30% of children under 3 are sleeping in rooms with televisions in them (Rideout, Vandewater, & Wartella, 2003).

Research has repeatedly demonstrated that having a television in one's bedroom is linked to higher levels of viewing and puts young people at risk for multiple

negative outcomes. These include obesity, poor school performance, and poor social skills (Borzekowski & Robinson, 2005; Delmas et al., 2007; Mistry, Minkovitz, Strobino, & Borzekowski, 2007). While less research has explored the relationships between these outcomes and other types of media in the bedroom, there are sound reasons to believe that having a computer or video game system occupy a similar space could lead to similar consequences. The lack of parental oversight in the media these children use is potentially the mechanism that links bedroom televisions and negative outcomes. With additional modes of electronic media available in their private space, young people with computers and game systems in their rooms are likely to experience high levels of use and exposure to age-inappropriate material.

**Very Young Children's Media Use** Until fairly recently, it was assumed that children under the age of 2 did not watch television. No content was created for this audience, and the limited research in this area indicated that infants and toddlers were unable to understand and learn from television. Between 1998 and 2000, however, Baby Einstein videos, designed to be viewed by very young children, became immensely popular. Their educational value, while implied by the marketing, was not backed by research findings. The great success of these videos spawned a new market with competing video releases as well as a digital television network with constant content for infants and toddlers.

Early research in the area of young children's television viewing indicated that it was difficult for children under the age of 2 to apply information conveyed to them through a television to a real-world task. Coining the phrase "video deficit," investigators found that it was more difficult for young children to imitate actions demonstrated by a researcher on a screen than those demonstrated face-to-face (Anderson & Pempek, 2005; Barr & Hayne, 1999). By 2007 the first academic reports had been released evaluating the educational and developmental usefulness of videos such as those created by Baby Einstein and other companies. Some of this early research has found evidence of a relationship between viewing baby-targeted videos and smaller vocabularies (Zimmerman, Christakis, & Meltzoff, 2007). As this research area grows and children become media users at younger and younger ages, social scientists will begin to have a more complete understanding of the effects of early viewing on brain development and lifelong cognition.

**Internet Safety** Childhood and adolescence have been forever changed with the advent of the Internet. Along with its potential to expose young people to previously inaccessible information and broad cultural perspectives come concerns about the medium's impact on well-being and overall safety.

As young people began to utilize the social components of the new technology, researchers examined links between virtual connectivity and social outcomes. Early investigations received broad attention and indicated that Internet use contributed to feelings of depression and loneliness as well as reductions in family communication and social support (Kraut et al., 1998). Research from the early 21st century has identified online communication with unknown or lesser known individuals as linked to feelings of loneliness, while no relationship to well-being has been found for general use and communication with friends (Gross, 2004; Gross, Juvonen, & Gable, 2002). While interactions with strangers do occur online, it is much more common for young people to use the Internet to communicate with their local friends (Gross, 2004). Children of the early 21st century will grow up interacting online, and as they enter adulthood, it will be possible for research to track the long-term effects of early Internet use on social adjustment and well-being.

A major concern with young people's online interaction is the potential for them to be targets of sexual predators. Apart from the news attention given to extreme and rare crimes, there is evidence from survey research that a true, day-to-day threat exists. A survey from 2005 found that approximately 17% of 16- to 17-year-olds experienced some type of unwanted or inappropriate sexual solicitation online. Promisingly, this was a drop from 23% in a similar survey performed five years earlier (Mitchell, Wolak, & Finkelhor, 2007). If young people are adequately prepared for the dangers present online, then the Internet has the potential to be an environment in which they supplement their real-world relationships with valuable virtual interactions.

## CONCLUSION

From the mid-20th century to the early 21st century, electronic media has been playing a role of ever-increasing importance in the lives of children and adolescents. Researchers and theorists have continually sought to understand the motivations behind the use of media as well as its influences on young people's social, physical, and cognitive well-being. The next 50 years will most certainly see advances in technology that will offer young people both promise and peril. It is the continual challenge of researchers to adapt their theories of media effects to these new technologies and seek to understand their contributions to the lives of children and adolescents.

**SEE ALSO** Volume 1: *Activity Participation, Childhood and Adolescence; Media Effects; Obesity, Childhood*

*and Adolescence; Youth Culture;* Volume 2: *Time Use, Adulthood;* Volume 3: *Time Use, Later Life.*

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***David S. Bickham***

## MEDIA EFFECTS

Public concern about media influence is as old as media forms themselves. The debates and controversies of the early 21st century about video game violence and sexual images on the Internet can be understood not merely as contemporary issues but rather as the latest in a long-standing series of critical conversations about the capacity of the media to affect audiences of all ages. From the comic books and pulp fiction of yesteryear to the electronic and interactive media of the early 21st century, media effects have raised the ire of parent and watchdog groups, inspired research scrutiny by scholars, triggered inquiry by the U.S. Congress, and captured the imagination of the public at large.

Although media influence has been documented in college-age and adult populations, much attention to the topic has centered on media influence on children and adolescents. Young people are often considered particularly vulnerable to media effects because their notions of social roles and cultural norms—and their own place within roles and norms—are in flux. The firsthand knowledge that older audience members use to question or counter media messages is limited in children and adolescents by age and experience. The media, thus, become important sources of cultural and social information for the young. Media effects are an important area of study also because of the central role of media in the lives of young people, with the typical 8- to 18-year-old spending more than 6 hours per day with various forms of media (Roberts & Foehr, 2004).

Some media effects have been shown to occur in audience members of all ages or within the broad stages of childhood or adolescence, but for other media effects, there are developmental periods in which an influence is more or less likely. Huesmann, Moise-Titus, Podoloski, and Eron (2003), for example, found that heightened exposure to violent media between the ages of 6 and 9 poses a particular risk for long-term effects on aggression. In another example, brand loyalty has been shown to develop as early as age 2 in children, and preschoolers are especially likely to request items they have seen advertised. Because diet and exercise habits are formed between the ages of 2 to 4 years, and given the amount of advertisements for high-sugar or salty foods that children are exposed to and the paucity of advertisements for healthy foods, media exposure by children in this young age range can contribute to the development of poor dietary habits.

### MAIN THEMES

The potential for violent images in film, on television, and in video and computer games to influence individuals is the single topic that has spurred the largest number of studies and inquiries among media researchers. More than 200 studies to date have used experimental (both lab- and field-based) and survey (including longitudinal) methodologies to explore exposure to violent television and film and aggressive outcomes. Among most social scientists of the early 21st century, the conclusion drawn from this research is unequivocal. Media violence does contribute to the learning of aggression, with convincing statistical links established between various forms of media exposure and attitudes about aggression, aggressive thoughts, and, perhaps most critically, aggressive behavior. The conclusions from these studies have been confirmed through meta-analysis as well. Similar research concerning video game violence is growing, with dozens of experiments and surveys that collectively and decisively point, once again, to the conclusion that video game violence can influence the aggression (in thoughts, feelings, attitudes, or behavior) of individuals young and old. Once again the technique of meta-analysis has synthesized these studies and documented a statistically significant relationship between exposure to violent games and aggression.

Yet the effects of media violence on aggression are just one way to conceptualize the influence of media violence. Other studies, admittedly much smaller in number and many now rather outdated, have supported a desensitization influence, or the potential for repeated exposure to media violence to lower the emotional and/or physiological (e.g., heart rate, blood pressure) response that would usually attend such exposure. Still another manner in which media violence has been shown to affect individuals is through cumulative exposure to television's violent stories (present, in large part, regardless of time slot, genre, or other distinction) and its ability to cultivate perceptions of social reality. Survey research supporting George Gerbner's cultivation theory, as well as more recent experimental inquiries to attempt to explain how individuals process violent television content, has provided ample evidence that heavy television viewers tend to perceive the world around them as dangerous, violent, and threatening compared to lighter television viewers.

Members of the public often express concern about the amount of sexual content in media as well, and the potential for that content to influence audience members. Researchers have not examined this topic as thoroughly as the topic of violence, but nonetheless a few key patterns emerge in the research evidence. A couple of high-profile studies from the early 21st century have used longitudinal survey design to determine that exposure to sexual content on television among early adolescents is a significant contributor to whether they initiate sexual intercourse over the time span of the 2-year study (e.g., Martino, Collins, Kanouse, Elliott, & Berry, 2005). Previous to these studies of direct effects, research in this area had largely been confined to evidence from surveys that showed heavy

exposure to television was associated with perceptions of the number of peers who are having sex and other perceptions of sexual behavior in the "real world."

The ability of the media to relay information to audiences regarding gender roles is another key aspect of media effects research. For decades, researchers have conducted experiments and performed surveys to investigate the messages that individuals, especially children and adolescents, receive from television and commercials regarding the "proper" and acceptable ways of being for women and men and for girls and boys. The surveys, once again often but not always conceived within the theoretical tradition of cultivation theory, and undertaken largely in the 1970s and 1980s, have shown the potential of heavy television viewing to be associated with stereotypical or otherwise narrow ways of considering gender (e.g., heavy viewers would be more likely to think women should cook and clean or that men should be scientists or doctors). Experiments have shown the capacity for commercials geared toward children to teach gendered ways of interacting with toys (e.g., boys play in a "rough and tumble" way outdoors with trucks, whereas girls play in a more subdued manner indoors with dolls). Importantly, however, the research evidence has long established that if a depiction on television is counter-stereotypical (e.g., a female character fixes things with tools), then the effect on the child audience can be characterized as a widening of conceptions of gender roles rather than a narrowing.

Finally, and relating to this last point, there has been a vast amount of research undertaken with the goal of identifying how audience members young and old are influenced by advertising and commercial content in media. Scholarly inquiry in this area has addressed a broad range of pressing social issues. For instance, experiments have documented dissatisfaction with one's body among adolescents (especially young women) after exposure to magazine advertisements featuring "flawless" and unrealistically slender models. Other experiments have shown that children learn erroneous information about nutrition and can develop preferences for nonnutritious foods through exposure to commercials for fast foods, soda and other sugary beverages, and candy and salty snacks. Still other studies have examined the potential for public service announcements and other aspects of public communication campaigns—the kind that might admonish teens to refrain from smoking, for instance—to change attitudes and behavior in a manner that would advance public health and safety.

## KEY THEORIES

A review of all or even most of the theories that have been advanced to explain media effects is well beyond the scope of this entry, but two theories are particularly noteworthy, in addition to the already discussed cultivation theory. Social learning/social cognitive theory is one of the most widely recognized and supported media effects theories, whereas the general aggression model can be understood as a combination of key aspects of a number of previous theories. These theories provide insight regarding why and how the media have the effects reviewed above.

Social learning theory, more recently referred to as social cognitive theory to emphasize the mental processing of social information, proposes that people learn how to act by observing others (Bandura, 1986, 2001). The ability to learn vicariously from real-world others and those presented on television is a unique human capacity, as well as a particularly common and important pursuit for young people because of their developmental tendencies. The theory predicts that the consequences that ensue from an observed model's actions—positive or negative—play a vital role in whether the child will adopt or emulate those actions. For example, if a child is in an environment in which violent behaviors are modeled and are rewarded or simply go unpunished, it follows that the child will then learn to act aggressively. Conversely, if a child is provided with a positive model, the likelihood that that child will emulate that positive behavior increases. Although real-life models (i.e., family and peers) may have the most influence on behavior, exposure to characters in different media forms has been shown to influence aggression levels as well as prosocial behaviors.

One critique of this theory is that there is no empirical evidence to suggest that the short-term effects observed in laboratory situations extend outside the laboratory or later on in life. Moreover, some believe that the theory does not sufficiently take into account the unique factors that each person brings to the viewing situation (e.g., baseline levels of aggression, prior exposure to violent media, socioeconomic status). Beginning in the 1990s, researchers turned their attention more closely to the study of the influence of individual differences with respect to media effects. In addition, with the introduction of the general aggression model, the possible effects of individual differences have come to the forefront.

The general aggression model was conceptualized by Craig Anderson and Brad Bushman and introduced in 2002. With regard to violence and aggression it is perhaps the most comprehensive media effects framework to date. This model takes into account both internal (or personological) and external (environmental or situational) factors when looking at the effects of media. Several characteristics are considered in the person-related variables that an individual brings to the media exposure situation, such as personality traits, gender, beliefs, attitudes, long-term

goals, and scripts (or previously learned, processed, and stored information). Research has shown that individually, all of these elements play a role in predicting whether a person will act aggressively. By taking all of them into consideration at once, the model is better able to assess how susceptible or resistant an individual is to acting aggressively in response to violent media. The situational factors that the model explores include aggressive cues present in the physical environment (such as weapons), provocation, frustration, and incentive to aggress. Together these two sets of factors affect cognition, affect, and arousal. Therefore, a person with certain personality traits or who is experiencing a particularly stressful or frustrating situation may be predisposed to interpreting violence differently than another person; that is, depending on individual experiences and the larger context, viewing violent media may produce strikingly different effects or even no effects at all.

The general aggression model has been applied only to violent media, but it may be a useful tool when considering other types of media effects as well. Although there is sufficient evidence to show that various types of media content can affect audience members, the extent to which internal and external states quell or exacerbate these effects remains underresearched. To fully understand the effects of the media, more thorough theoretical propositions (such as that in the general aggression model) are needed.

## FUTURE DIRECTIONS

Future scholarly attention is likely to place the individual differences that media audience members bring to a media exposure situation and situational factors into further account through theory and research. Past research has arguably focused much of its attention on whether media effects occur at all, perhaps driven by a desire to be sure media are not dismissed as "just entertainment" but rather are taken seriously for their potential contribution to human behavior and social life. Once clear patterns of whether effects occur have been revealed (as is the case with violence and aggression, for instance), future inquiries are likely to continue attempts to address under what circumstances and for whom effects are most (and least) likely. In doing so, the complexities of media influence will be further revealed.

Media effects research will also look increasingly at the role of new technologies in everyday life, and judgments will be made regarding whether previously existing theories that are based largely on television and print media forms continue to apply convincingly in a digital and interactive media environment. For example, what new social and cultural issues are raised through interacting with the Internet? The scholarly attention in the early 21st century to social networking sites such as MySpace and their role in adolescent life is an example of this new direction for media effects research. Does video game violence influence individuals in similar ways as television and film violence, or are there unique aspects of video game technology that suggest otherwise? What are the implications, more broadly, of a world in which children are spending ever larger amounts of time with media? These are other critical questions likely to guide future media effects research.

Another new direction for media effects research is to study ways of reducing the likelihood of negative effects, particularly for children and adolescents. Parental mediation, which includes the ability of the parent or caregiver to actively counter media messages by speaking up during co-viewing occasions, is likely to gain even more research attention in the years that come. Similarly, a growing focus on media literacy research, which tests the effectiveness of critical and analytical discussions of media in the K–12 classroom, is likely to continue.

Finally, links between media effects research and public policy will continue to be exceptionally important. A unique feature of scholarship in this area is that it is of the utmost interest and relevance to parents, citizen groups, and policy makers. Media effects researchers have been called upon to testify in Congress, for example, regarding whether advertising to young children is ethical. The V-chip (created through the Telecommunications Act of 1996), which can be programmed to block out television content deemed objectionable by parents, is the result, in large part, of the evidence accumulated by those studying the effects of media violence. Media have a huge and growing presence in the lives of children and teens, and parents and policy makers are quite concerned with the health and well-being of children and teens. Thus, the need to draw on this sort of research in governmental decision making as well as decision making within individual households is likely to grow. Valid and reliable media effects research, therefore, will continue to be exceptionally important.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Cultural Images, Childhood and Adolescence; Media and Technology Use, Childhood and Adolescence; Sexual Activity, Adolescent; Socialization, Gender; Youth Culture.*

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**SEE** Volume 1: *Puberty.*

## MENTAL HEALTH, CHILDHOOD AND ADOLESCENCE

Mental health has been defined as the "successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and cope with adversity" (U.S. Department of Health and Human Services, 1999, p. vii). Conversely, mental illness or mental health problems have been described as "alterations in thinking, behavior, and mood with concomitant impairments in social, educational, and psychological functioning" (Roe-Sepowitz & Thyer, 2004, p. 67). Those authors further suggested that "to the extent that so-called mental disorders have etiologies related to environmental, biological, familial, or peer factors, they may not be justifiably construed as *mental* disorders at all, but rather behavioral, affective, and intellectual disorders" (Roe-Sepowitz & Thyer, 2004, pp. 68–69). In this entry mental health disorders of childhood and adolescence are defined as problems that interfere with the way young people think, feel, and act and that when left untreated can lead to school failure, family conflicts, drug abuse, violence, and suicide.

Mental health problems affect one in every five young people at any specific time (U.S. Department of Health and Human Services, 1999). Although the diagnosis of a particular disorder is often difficult, contradictory, or impossible, it is helpful to categorize the various types of abnormal behavior more commonly seen in youth as anxiety disorders (e.g., phobias, chronic anxiety, obsessive–compulsive disorder), mood disorders (e.g., depression), developmental disabilities (mental retardation, autism), organic brain disorders (diseases, brain injury), conduct disorders, eating disorders, and attention deficit hyperactivity disorder (ADHD; American Psychiatric Association, 2000).

The prevalence rate differs for each condition, and trends are often difficult to interpret as they are affected by changes in diagnostic criteria and classification, improved assessment techniques, the increased availability of services and treatment interventions, and the requirement of a diagnosis for receipt of services. For example, the current prevalence rate for autism, estimated to be as high as 1 in 250, represents more than a 500% increase in diagnoses in one decade. The cause of that dramatic increase has not been determined, but no doubt it has been influenced by the factors mentioned above (Calahan & Peeler, 2007).

In line with the thinking of Dominique Roe-Sepowitz and Bruce Thyer (2004), the mental health of children and adolescents is discussed in this entry in terms of the development, both physical and psychosocial, of the individual from preconception through adolescence. Because these disorders typically occur at particular developmental stages of childhood and adolescence, each condition is discussed according to the stage at which it generally is noted.

Human development is a complex process that is influenced by multiple genetic and environmental factors. From the moment when the egg is fertilized by the sperm, the being that will be transformed from embryo to fully developed infant will proceed through the various stages of growth, development, maturation, and aging with a predetermined blueprint that will undergo various changes as the fetus confronts the environment in which it lives. Thus, the infant is born with a physiology determined by prenatal influences, and throughout its life will be influenced by the context in which it will live. If children and adolescents are to develop satisfactory mental health—behaviors conducive to productive activities, fulfilling relationships, and the ability to adapt to change and cope with adversity—they need a healthy physiology that is fostered by a supportive physical and psychosocial environment. When one or the other of these influences goes awry, remediation efforts will be required of parents

and/or caregivers and mental health and social service professionals.

Dwyer and Hunt-Jackson (2002) stated that to understand child and adolescent mental health from the perspective of human growth and development, knowledge must be derived and subsequently drawn from a variety of sources. Those sources include psychoanalytic theories and stage theories, biological facts, human behavior theories, economic reports, legal issues, and specific cultural information. Thus, assessment becomes "somewhat of an *art,* and the more available choices, the more opportunities there are for adequate assessment and intervention" (p. 84). In their overview of the life span perspective in human growth and development, Dwyer and Hunt-Jackson noted that although Freud and other psychoanalytic and psychodynamic theorists proposed developmental stages in early life, the life span perspective expands on those ideas. They go on to state that "according to Lefrancois (1993), this unique theoretical view studies the developmental changes that transpire in the individual from conception through old age" and that "key to this study is the consideration given to the biological, psychological, and social processes and influences that account for changes in human behavior" (p. 84).

Dwyer and Hunt-Jackson (2002) noted that although the works of earlier developmental psychologists, including Piaget, Bowlby, and Erikson, suggested that human developmental ceases when adulthood begins, current theorists agree that human development is a continuous process. Because human development is continuous, it also is bidirectional, meaning that children influence their parents as much as parents influence their children and that all development is influenced by the environmental context.

One might conclude that children and parents influence each other along life's continuum and that environment functions pre- and postnatally to determine how, when, and if genetic predispositions will evolve. Peter Gluckman and Mark Hanson (2006) concluded that "environmental factors acting during the phase of developmental plasticity interact with genotypic variation to change the capability of the organism to cope with its environment in later life . . . and because the postnatal environment can change dramatically, whereas the intrauterine environment is relatively constant over generations, it may well be that much of humankind is now living in an environment beyond that for which we evolved" (p. 4). Thus, the study of child and adolescent mental health must begin with genetic and environmental prenatal influences and move through each developmental period to address both biological and external influences on mental health.

## PRENATAL INFLUENCES ON HUMAN GROWTH AND DEVELOPMENT

In spite of advances in the field of human life span development, there are inherent difficulties in deciphering clues about the relative roles of nature and nurture in the origins of health and disease. People are familiar with the saying "you are what you eat" but sometimes do not recognize that individuals are also products of what their grandmothers may or may not have eaten. People also may not be familiar with the role of the father in prenatal as well as postnatal development. It has been discovered, for example, that deficiencies in folic acid during pregnancy can result in neural tube defects in the fetus. Further, children born to mothers whose own mothers might have been exposed to nutritional deficiencies or toxins such as certain medications may be affected by genetic or physiological aberrations in the womb. Similarly, fathers exposed to toxins may have altered sperm that influences prenatal development. However, not all mothers deficient in folic acid will bear children with neural tube defects, nor will all children with neural tube defects be the offspring of nutritionally deprived mothers. Similarly, nutritional and other biological insults in grandmothers or grandfathers may or may not result in defects in subsequent offspring.

Genetic factors link a fetus to the family ancestry and determine the individual characteristics that influence subsequent development. These physiological changes occur within a psychosocial context. As outlined by Keith Godfrey (2006), determinants of fetal growth and functioning include biological, psychological, and social factors. Those factors include the pregnant woman's age at the time of conception, hereditary characteristics, nutrition, alcohol consumption, smoking habits, and ingestion of prescribed or illicit drugs. Physical neglect or abuse plays a role in the development of a baby, as do environmental factors such as access to medical care, financial and emotional support, and exposure to hazardous chemicals. The emotional status of the mother and of her partner and other family members has an effect on the baby. Chemical and hormonal levels in both the brain and the bloodstream affect the biological processes of the mother and the baby when the mother experiences high amounts of stress; this may have an adverse effect on the child's physical and mental health.

## INFANTS AND TODDLERS (BIRTH TO 2 YEARS)

During the first 6 months, a normally developing baby will progress from random ineffectual motions to accomplishments such as rolling over and beginning to crawl. The baby will begin to reach for objects, grasping them

and learning about them from touch and taste. Newborns are active, constantly interacting with their environment and seeking stimulation and opportunities to improve their competencies (Dwyer & Hunt-Jackson, 2002). During this period an infant expends significant amounts of energy trying to understand and master his or her world.

Within the next few months, infants gain pleasure from their increasing ability to affect what happens to them and the world around them. Erik Erikson (1964) termed the next stage the trust versus mistrust stage, the time during which babies learn to trust their environment and caregivers. When his or her cries are responded to with cuddling, food, and affection, an infant soon realizes that he or she has control over a portion of the immediate environment and is able to develop a sense of security that allows further emotional growth. Without this caring response, however, infants become mistrustful and form an insecure or indifferent attachment to his or her parents. Thus, parents must be educated about the needs of and appropriate responses to infants during the various developmental stages. Parents must be able to facilitate emotional and cognitive development by providing consistency and warmth for the infant. Consistency has been found to be important in that infants who are separated from a consistent caregiver for long periods tend to have retarded motor development, delayed language development, and cold emotional responses. There is also an increased probability of the development of delinquent behavior and an inadequate self-image.

The environment should be structured so that it stimulates the infant's sensory, motor, and social exploration of his or her surroundings and meets the biological needs. In terms of positive mental health, infants must learn to trust or mistrust adults on the basis of the care that is provided. It has been posited that the critical period of attachment and trust occurs between the ages of 6 months and 2 years. The primary role of the health practitioner is to assist parents in providing the infant with an environment conducive to the successful resolution of the issue of trust versus mistrust. Parents and caregivers are responsible for providing a stimulating environment so that the child can grow intellectually and develop in terms of cognitive and social competencies, both of which are essential to good mental health. Parental effectiveness courses should focus on helping parents develop better communication and consistent child management skills, two variables that have been shown to be necessary conditions for successful child rearing (Thyer & Wodarski, 1998, 2007).

**Developmental Disabilities** Developmental disabilities are defined as significant deficits in intellectual or cognitive functioning, a significant deficit in adaptive behavior, and the presence of these deficits during the developmental period of an individual's life (before age 18; American Psychiatric Association, 2000). Although most babies are born healthy, 2–5% of live-born infants have a major developmental defect (Heindel & Lawler, 2006).

Children and adolescents with developmental disabilities have been found to be at a higher risk of psychiatric comorbid disorders such as ADHD, depression, learning disorders, and childhood psychoses (Andreason & Black, 2006; Filho et al., 2005). Thus, the differential diagnoses for developmental disabilities often are complex.

## EARLY CHILDHOOD (2 TO 6 YEARS)

Young children continue to enlarge their repertoires of behaviors between the ages of 2 and 6, and their success at those behavioral tasks determines their future mental health. Physical coordination improves, and the child uses locomotion to explore the environment while learning to master independence-producing tasks such as dressing and toilet training. The use of language increases, as do expressive social interactions with family members and friends. The child becomes more efficient at accumulating and processing new information, providing a foundation for the development of intellectual attributes (Bartsch & Wellman, 1989; Moses & Flavell, 1990).

During this developmental period children begin to see themselves as individuals, separate from others. Erik Erikson (1964) described the two psychosocial crises of this stage as initiative versus guilt and autonomy versus shame and doubt. Initiative results when a child responds actively to his or her environment and is eager to investigate it. The central process by which this occurs is identification. It is necessary for children to explore their environments, and they must have confidence in their ability to control themselves. If adults limit investigation and experimentation, the child develops an overwhelming sense of guilt.

A toddler usually passes through a period when his or her primary word is *no;* this represents a child's attempts to control and order the environment. The establishment of autonomy requires tremendous effort by the child as well as patience and support from the parents. The child begins to develop feelings of self-confidence and independence. The critical point in the development of mental health is the process of moving from dependence to independence. If a toddler develops symptoms such as temper tantrums, aggression, withdrawal, phobias, and school phobia, interventions are available to help parents and caregivers alter the maladaptive behaviors (Thyer & Wodarski, 2007).

There is some controversy about the cross-cultural universality of these developmental crises. Some theorists suggest that independence is valued more highly in European and American cultures (Thomas, 1990). Leonore

Adler (1989) warned that on a worldwide basis individual as well as group differences occur when behavior is observed and studied. The child grows within a social context and during this phase begins to learn the knowledge, values, and skills necessary for effective functioning when interacting in the group setting. These socially sanctioned ways of life (culture) are transmitted to the child through the socialization process, and parents are the first agents of that process. Hence, it is within the family that the child first experiences the requirements of group life. Family circumstances and parenting styles are key variables in a child's adaptation to society (Dwyer & Hunt-Jackson, 2002). Ultimately, the successful adaptation of a child to societal rules, norms, and mores will determine his or her mental health.

A young child's playmates augment the socialization process. By providing cognitive stimulation, play helps prepare children for interaction with their environments and lets them learn and rehearse adult roles. Using play therapy, practitioners allow a child to create imaginary situations in which problems can be expressed and resolved. Play therapy often is used by mental health practitioners as a mechanism for interpreting children's behaviors and helping them learn to cope better (Ganda & Pellegrini, 1985).

The development of good mental health in children requires the provision of appropriate and consistent limits as the child begins to learn self-control. Parents' form of discipline often includes the power-assertive style that involves the use of physical punishment and threats. Psychological discipline may be characterized by love withdrawal and guilt (Patterson, 1982). During this stage the child is beginning to develop moral standards through a gradual internalization of parental values and standards. Numerous researchers have reported that females experience more guilt than males during this developmental stage, and it has been suggested that this results from the unclear messages that society presents to females about their roles and appropriate behaviors.

The development of good mental health requires parental discipline to help the child interpret the undesired behavior. Parents also need to generate alternative actions, explain the reason behind discipline if any is given, and stimulate empathy for the victim of the behavior. Parents should be consistent in their discipline patterns and should set suitable limits that result in appropriate behavior (Quinn, 1998). During early childhood children learn primarily by imitation. If parents model deviant, aggressive, and/or uncontrolled behavior at home, the toddler is likely to imitate that behavior (Wodarski & Wodarski, 1998). Parents can be instructed in ways to exhibit appropriate socialization behaviors.

Because young children are in the early stages of language development, they concretely interpret verbal messages such as "God will punish you" and "big boys don't cry"; that is, those statements are accepted at face value. The development of sex roles, morality, and competence is especially vulnerable to such labels, and parents should be encouraged to use direct communication rather than all-encompassing statements (Dwyer & Hunt-Jackson, 2002).

During this stage of development children have their first experiences with structured early childhood education in the form of preschool, kindergarten, and the first grade of elementary school. With support and patience most children successfully make the transition from the security of the family to the larger school social system. Children who do not experience early school success are at greater risk for dropping out and becoming involved in delinquency (Feldman, Caplinger, & Wodarski, 1983; Rapp-Paglicci, Roberts, & Wodarski, 2002). All children who appear to be struggling with school adjustment require early assessment and intervention; if this is done early, those children can be identified and responded to with appropriate planning.

**Separation Anxiety** Separation anxiety disorder (SAD) is a severe and disabling form of a maturational experience that all children have (Andreasen & Black, 2006). The fundamental feature of SAD is excessive anxiety about separation from an attachment figure at home. Children with this disorder typically become socially withdrawn and display apathy, sadness, or difficulty in concentration and attention to work or play when separated from the parent or other figure (Sowers-Hoag & DiDona, 1998). The symptoms include distress at being separated from home, worry that harm will come to the parents, and worry that the child will be lost or separated from them. The behaviors include school refusal, sleep refusal, and clinging, and the physiological symptoms include nightmares and physical complaints such as headache and nausea.

Common differential diagnoses include but are not limited to panic disorder, mood disorders, generalized anxiety disorder, and social phobia. Depressed mood is typically concurrent and may intensify over time, usually precipitating an additional diagnosis of dysthymic disorder or major depressive disorder. SAD often is comorbid with school phobia. Approximately 4% of children and young adolescents present with SAD, and the prevalence decreases from childhood through adolescence. It may develop after a life stressor such as the death of a relative or pet, a change in schools, or an illness of the child or a relative. Young people with chronic illnesses may be at higher risk for SAD (Sowers-Hoag & DiDona, 1998). Onset may be as early as preschool age and may occur at any time before age 18 years, although onset in late adolescence is uncommon. The incidence is apparently equal in males and females, although some research has

shown that it may be more common in girls than in boys (Sowers-Hoag & DiDona, 1998).

SAD generally is treated through individual therapy with a variety of models of intervention. Karen Sowers-Hoag and Toni DiDona (1998) identified these models as psychodynamic models, play therapy models, cognitive-behavioral treatments, exposure-based procedures, contingency management procedures, and real-life exposure techniques.

### LATER CHILDHOOD (7 TO 12 YEARS)

During later childhood the influence of school life becomes paramount. This is a critical time during which someone other than the parents exerts a major influence on the socialization process. Children begin to assess their self-worth through a comparison and evaluation of their academic abilities, athletic skills, physical appearance, and social acceptance. Erikson's (1964) stage of industry versus inferiority describes the way children mentally compare themselves with peers, parents, and other role models to see how much they resemble those others (Dwyer & Hunt-Jackson, 2002). Characteristics of children who have high self-esteem include maternal certainty of child rearing, minimal daily family conflict, closeness with siblings, closeness with peers, parental warmth, consistent and firm discipline, and involvement in family decisions. Inconsistency, harsh discipline, minimal parental attention, and continuous moving are factors that dispose a child to low self-esteem, a contributing factor to conditions such as conduct disorder.

Susan Harter (1987) noted that the most important sources of support for children's self-esteem are parents and classmates, not teachers and friends. Teachers have expectations that when transmitted to the child can affect school performance and consequently self-worth. Hence, schools are major contributors to the maturation of a child as they provide opportunities for meaningful and prolonged interactions with significant adults and peers.

Children's interactions with their peer group during this period serve several functions. As mentioned previously, peers influence an individual's sense of self-esteem. Additionally, peers reinforce key cultural norms, thus affecting the formation of values and attitudes in the child. They are also important sources of information about appropriate behavior. Gender roles and the ensuing behaviors receive strong reinforcement from the child's peer group. During the early school years a child engages in sex-role identification, which includes the understanding of gender labels, sex-role standards, sex-role preference, and identification with the same-sex parent. For the most part children want to be like their peers; they want to wear the same clothes, use the same slang terms, and play the same games. However, illness, hospitalization, a different physical appearance, and different speaking styles can cause a child to be less acceptable to peers (Quinn, 1998). Most children become accustomed to these differences if they have enough contact with adults who do not teach the prejudice that continues to exist in society.

Peer group structures provide opportunities for growth in a school-age child, and in growth there can be pain. Teachers, counselors, and school social workers frequently help children negotiate small-group power structures and thus learn social skills that foster broader societal adjustment. Teaching communication, conflict resolution, and assertiveness skills can be accomplished by these professionals in a small-group setting.

At this life stage children are in almost daily contact with individuals (e.g., peers, teachers, neighbors) outside the family. At this time signs of problems in adjusting socially, psychologically, or academically are noted. Here the mental health practitioner's role is to design and implement a treatment plan with the child, the family, and relevant collaterals. Caution must be used in working with children this age because frequently the behavior they present has been labeled (e.g., behavior disordered, emotionally disturbed, ADHD) by the classroom teacher or family member, and this label can have a detrimental impact on self-concept and social functioning (Thyer & Wodarski, 1998).

Child abuse is most likely to be detected during the early school years. The child no longer is restricted to family contact or family-sanctioned contacts, and teachers and social workers who have been trained to recognize signs of abuse and neglect are expected to report cases of abuse. According to the U.S. Bureau of the Census (1992), the average age of an abused child is 7, with higher risk ratios for children who are younger (under 3) or older (teens). More than 2 million cases of child maltreatment, including physical injuries, neglect, and sexual and emotional abuse, are reported annually (Lauer, 1995).

In determining actual abuse and neglect professionals must take the cultural aspects relevant to each case into consideration. The United States has a diverse population with many different types of parenting styles. Kathleen Sternberg (1993) gave examples of parenting styles that seem to contradict each other but make sense in a sociological context. She included a study conducted by Diana Baumrind (1991) that found that authoritative parenting (including children in decision making and thus encouraging independence) is most productive with White middle-class children and authoritarian parenting (emphasizing compliance as a virtue and punishment as an appropriate way to enforce compliance) fosters social competence in Mexican American children. Although laws direct certain behaviors and children must be

protected, it is best to keep cultural differences in mind when determining the course to take in cases of suspected abuse and neglect.

**School Phobia** School phobia is a significant anxiety disorder in which children develop a fear of going to school and may develop methods for staying home. School phobia often is associated with school refusal, and there is evidence that SAD may be present in as many as 80% of cases of school phobia (Sowers-Hoag & DiDona, 1998). In younger children school phobia may stem from a fear that something will happen to them or their caregiver while they are at school. In older children school phobia usually has its roots in academic problems, social challenges, or bullying (Mayes & Cohen, 2002).

During the early childhood stage children become part of a larger system, and so they are exposed not only to family influences but also to influences from school officials, teachers, and peers. Separation may be traumatic for the child as well as the parents. School phobia can result in eventual school dropout. If a child has unsuccessful school experiences, the likelihood that he or she will drop out of school is greatly increased. School dropout is highly correlated with later delinquent activities (Feldman, Caplinger, & Wodarski, 1983). A child who does not complete this stage successfully will have numerous problem areas as an adult. Besides the obvious problems of low self-esteem and a sense of incompetence, the individual will be faced with the pressures of needing to earn a living at an early age.

**Conduct Disorder** Conduct disorder is a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated. There are four major domains of relevant behavior: aggression toward people and animals, destruction of property, deceitfulness or theft, and serious violations of rules (Andreasen & Black, 2006). Conduct disorder is one of the most frequently diagnosed conditions in outpatient and inpatient mental health facilities for children. According to the American Psychiatric Association (2000), the prevalence of conduct disorder ranges from less than 1% to more than 10%. The prevalence is higher among males than females, but the rate in females may be increasing (Andreasen & Black, 2006).

The disturbance in behavior that defines conduct disorder causes clinically significant impairment in social, academic, and occupational functioning. Conduct disorders have considerable comorbidity with childhood disorders such as learning disorders, ADHD, and mood disorders. At least 10% of children with conduct disorder have specific learning disorders. Twenty to 30% of children who present with ADHD also meet the criteria for conduct disorder (Andreasen & Black, 2006). The most commonly used and most effective treatments are behavior modification, family therapy, and pharmacotherapy (Rapp & Wodarski, 1998).

**ADHD** ADHD affects an estimated 3–5%, or 2 million, children in the United States and is considered the most common neurobehavioral disorder among school-age children (Dupper & Musick, 2007). Children with ADHD demonstrate inattention, hyperactivity–impulsivity, or both. These children have difficulty with details, instructions, and organization; are easily distracted and forgetful; and have trouble engaging in mental effort tasks such as schoolwork. The prevalence rate for males is six times higher than that for females and nine times higher among male versus female school-age children. Theories about causation include environmental agents, brain injury, food additives and sugar, and genetics, although genetics appears to be the only consistent link to the condition.

Early diagnosis and treatment, including medication and family behavioral therapy, are imperative as the condition can lead to poor peer relations that can lead to aggression, delinquency and school maladjustment, and family dysfunction that results in higher divorce levels, marital discord, and difficulty coping (Dupper & Musick, 2007). Behavior modification is the only nonmedical psychosocial treatment for ADHD and generally is prescribed in combination with psychopharmacology.

### ADOLESCENCE (13 TO 19 YEARS)

In American culture adolescence is the life stage that marks the transition from childhood to adulthood. As in the developmental phases that precede it, distinct biological, psychological, and social changes occur within the individual. Physically, an adolescent experiences a growth spurt associated with the onset of puberty. In the early 21st century individuals tend to reach adult height and sexual maturity faster than they did in the past. Known as the secular trend, this tendency to mature earlier has been attributed to better health care, better nutrition, and a higher standard of living (Chumlea, 1982; Lefrancois, 1993).

One of the important tasks for an adolescent is the development of a sense of identity. According to Erikson (1964), this is achieved only after a period of questioning, reevaluation, and experimentation. During the teen years, individuals experiment with various roles that represent possibilities for future identity development. Experimentation in academic pursuits, athletic endeavors, part-time jobs, hobbies, and dating relationships all contribute to identity formation in a prosocial fashion. Fergus Hughes and Lloyd Noppe (1985) reported that teens look ahead to a time when they will be independent adults. Described traits of disliked

adolescents include physically handicapped, shy, timid, withdrawn, quiet, lethargic, listless, passive (a nonjoiner), reclusive, pessimistic, and complaining. For a child with a physical disability, it is not uncommon for traits of and statements about physical limitations to be mistaken for complaints. Similarly, during this period role confusion can lead to poorly thought-out actions and behaviors that appear irresponsible, childish, or rebellious. Some adolescents become entrenched in this acting-out behavior and seek negative reinforcement from it that can delay the transition to adulthood (Dwyer & Hunt-Jackson, 2002).

### INFLUENCES ON MENTAL HEALTH DURING ADOLESCENCE

Two influences on adolescent mental health are the family and delinquency.

**Family Dysfunction** Socially, adolescence provides a period for moving from dependence on one's parents to adult independence. Parent–adolescent relationships frequently are strained as the individual struggles to assert independence. Conflicts often arise about performing chores, studying, using time appropriately, dating, choosing friends, and spending money (Kaluger & Kaluger, 1984). These conflicts test family socialization and communication patterns.

Mental health practitioners encounter adolescent clients for a variety of reasons. Families often seek intervention because of conflicted relationships at home. As Lawrence Shulman (1992) pointed out, teenagers are frequently the scapegoats for family dysfunction; thus, family therapy is the treatment of choice. Baumrind (1991) stated that parents who are responsive yet demanding combine authority with reason and have frequent communication with a child tend to have adolescents who are assertive, responsible, and independent. These qualities should be fostered in families receiving treatment.

**Adolescent Delinquency** Despite the relatively static delinquency rates of the 1980s and early 1990s, the adolescent homicide rate more than doubled between 1988 and 1994 (Kroshus, 1994). The Centers for Disease Control and Prevention (CDC; 1994) reported that almost half of homicide victims in 1991 were males 15 to 34 years old, with adolescents accounting for the greatest change in rate. Among males ages 15 to 19, homicide surpasses suicide as the second leading cause of death. Thus, there is an escalating trend of juveniles being both the perpetrators and the victims of violence. The CDC suggested that factors influencing this trend include poverty, inadequate educational and economic opportunities, social and familial instability, and exposure to violence as a preferred technique for settling disputes (Dwyer & Hunt-Jackson, 2002). Related to adolescent delinquency is the problem of school dropout. John Alspaugh (1998) reported that approximately one fourth of ninth-grade students in the United States drop out before graduating from high school.

**Anxiety Disorders and Depression** Anxiety disorders seen during the childhood and adolescent years include phobias, obsessive–compulsive disorders, generalized anxiety, separation anxiety, and panic disorders. School phobias and separation anxiety generally manifest earlier in childhood. The anxiety disorders rank highest among all mental disorders of childhood and adolescence (Costello et al., 1996) and can impair cognitive and social functioning. Several risk factors have been identified, including early childhood temperament, negative life events, parents' behavior, and adolescents' coping styles (Roe-Sepowitz & Thyer, 2004).

Childhood and adolescent depression is closely linked to anxiety disorders. It has been estimated that as many as 1 in 33 children and 1 in 8 adolescents are clinically depressed (Wodarski, Wodarski, & Dulmus, 2003). Depression in children and adolescents differs from depression in adults (Roe-Sepowitz & Thyer, 2004). Children and adolescents who are depressed complain more of anxiety symptoms such as separation anxiety, reluctance to meet people, and somatic symptoms of headaches and stomachaches, whereas adults more often exhibit psychotic behaviors (Roe-Sepowitz & Thyer, 2004). If children and adolescents exhibit psychotic symptoms, they tend to be more auditory than delusional (U.S. Department of Health and Human Services, 1999).

Five risk factors identified by the Institute of Medicine are believed to influence the probability of adolescent depression (Roe-Sepowitz & Thyer, 2004):

1. Having a parent or other close biological relative with a mood disorder;
2. Having a severe stressor such as a loss, divorce, marital separation, or unemployment; job dissatisfaction; a physical disorder such as a chronic medical condition; a traumatic experience; or, in children, a learning disability;
3. Having low self-esteem, low self-efficacy, and a sense of helplessness and hopelessness;
4. Being female;
5. Living in poverty.

Eating disorders, most commonly anorexia and bulimia, have emerged as a major adolescent mental (and physical) health concern and are often comorbid with depression. The American Academy of Family Physicians

## GENDER DIFFERENCES IN DEPRESSION

Before adolescence, boys tend to have higher rates of depression than girls. By age 13 or 14, however, girls are much more likely than boys to be depressed (Nolen-Hoeksema, 1990). Nolen-Hoeksema and Girgus (1994) proposed an integrative developmental model that incorporates biological, psychological, and social explanations for why the gender differences in depression emerge during adolescence. According to this model, before and after early adolescence, girls tend to demonstrate a more cooperative interaction style, less aggression, and a more ruminative, self-focused style of responding to distress, whereas boys tend to be more competitive, domineering, and aggressive. These preexisting differences then interact with biological challenges (e.g., pubertal development and dysregulation of ovarian hormones) and social challenges (e.g., parental and peer expectations and attitudes) of early adolescence to create gender difference in depression. Although the causes of depression are the same in girls and boys, boys are less likely than girls to become depressed in early adolescence because (a) they tend to be exposed to fewer negative and distressing biological and social challenges, and (b) they are less likely to have the preexisting tendencies that make them unassertive in responding to the challenges that they do face (Nolen-Hoeksema & Girgus, 1994).

Other types of mental health problems, including conduct disorder and substance abuse, are more common among boys and men (Kessler et al., 1994). Some researchers have argued that gendered behavioral expectations lead girls to internalize symptoms of distress and boys to externalize them (e.g., Rosenfield, Lennon, & White, 2005). In this way, studies that focus only on depression may underestimate distress among boys and men (Aneshensel, Rutter, & Lachenbruch, 1991).

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(1999) reported that 3% of women develop anorexia and another 8% develop bulimia. Treatment options must be comprehensive and multifaceted, directed at resolving the psychosocial issues, medical concerns, and nutritional needs of the client.

**Depression and Suicide** Adolescent depression and suicide are two of the most pressing problems in the American culture, and the evidence for the link between them is convincing. It has been suggested that more than 90% of children and adolescents who commit suicide have a mental disorder. Suicide attempts are most common among teens who have had previous psychiatric symptoms such as depression, impulsivity, aggression, antisocial behavior, and substance abuse (Berman & Jobes, 1991).

The CDC (2001) noted that in 1999 teen suicide was the third leading cause of adolescent death. In 1994 teen suicide ranked as the second leading cause of adolescent death, eclipsed only by accidents (Hoffman, Paris, & Hall, 1994). The need for accurate and timely assessments is clear. Because mood disorders such as depression substantially increase the risk of suicide, suicidal behavior is a serious concern for mental health practitioners, who must assess suicide risk when treating almost all teens and be ready to render treatment to adolescents experiencing a variety of problems.

Treatment for depression and attempted suicide should be provided in the least restrictive environment that is safe and effective for the child or adolescent. The selection of treatment depends on the severity of the illness, the motivation of the client and/or the client's family to receive treatment, and the severity of additional psychiatric or medical conditions. Cognitive-behavioral therapy, social skills training, and relaxation techniques have been used successfully (Wodarski & Feit, 1995).

**The Link between Depression and Substance Use and Abuse** Substance use and abuse is another problem that leads to mental health problems in teens. The U.S. Public Health Service (1998) found that the leading cause of death for adolescents is unintentional injuries, and 40% of those injuries are related to alcohol use and abuse. Mental disorders and substance abuse often coexist. Studies have shown that having depression or anxiety disorder in adolescence doubles the risk for later drug abuse and dependency (Bukstein, 1995). Mental health practitioners who work with chemically dependent adolescents and their families include social work and psychological counselors, group facilitators, and educators. Those roles can be used proactively with adolescents to prevent substance abuse.

## RISK FACTORS FOR MENTAL HEALTH DISORDERS

Although the determination of the causes of mental health disorders in children and adolescents is often elusive, certain situations and conditions predispose children and adolescents to abnormal behavior. These conditions generally are biological (genetics, chemical imbalances in the body, or damage to the central nervous system, e.g., through head injury or pre- or postnatal drug abuse) or environmental (exposure to high levels of lead; exposure to violence, e.g., witnessing or being a victim of physical or sexual abuse, shootings or muggings, or other disasters; stress related to chronic poverty, discrimination, or other serious hardships; maternal deprivation; faulty parental role models; physical or emotional abuse; or the loss of significant others through death, divorce, or broken relationships; U.S. Department of Health and Human Services, 1999). Two of the more common risk factors of childhood and adolescence that warrant special mention here are poverty and drug abuse.

**The Effect of Poverty** Although children from all socioeconomic and background types are vulnerable to mental disorders and problems, poverty increases the risk of those problems (Roe-Sepowitz & Thyer, 2004). Poverty places children at increased risk physically (inadequate health care and nutrition), psychologically (stress and self-esteem issues), and socially (homelessness and increased exposure to violence). In 1991 one in five children in the United States lived below the poverty line. This rate is expected to continue well into the 21st century (U.S. Department of Health and Human Services, 1999). Studies have demonstrated that poverty is correlated with a variety of negative outcomes, such as delinquency, academic underachievement, and poor physical and mental health (Thyer & Wodarski, 1998).

Interventions to ensure a healthy physical and psychosocial environment for a developing child may take several forms. Initially, interventions involve the expectant parents and/or other significant others, all of whom must deal with the many changes that occur with the birth of a baby. Expectant parents may need assistance in accessing and securing the resources needed (e.g., prenatal care, good nutrition, adequate financial support, and genetic counseling). Low-income families may be particularly in need of this support relative to information and advocacy because they may have the least access to high-quality prenatal, postnatal, and other medical care. The stresses associated with poverty put an added burden on a pregnant woman and her family, making the prebirth environment for the baby even more hazardous (Streever & Wodarski, 1984). Economic, social, and medical support must continue throughout childhood and adolescence to ameliorate the devastating effects of poverty on physical and mental health.

**Effects of Prescription and Illegal Drug Use on Pre- and Postnatal Development** A common problem in prenatal development and birth involves street and prescription drug use. The American Academy of Pediatrics (1998) reported that cocaine and marijuana use is most common among people ages 18 to 34 years, the ages at which pregnancy is most likely to occur. It is estimated that up to 40% of developmental defects result from maternal exposures to environmental or drug agents that affect intrauterine development. Adverse effects include death, structural malformation, and functional alteration of the developing infant (Heindel & Lawler, 2006). Despite the knowledge that these drugs also adversely affect the health of a child, the decision to stop taking drugs to protect a baby is a difficult one; sometimes it is a danger to the mother whether the drugs are legal or illegal. Withdrawal from street drugs can cause convulsions, and ending the use of prescription drugs may put the mother and child in danger of seizures, toxemia, diabetic complications, and other disorders.

## IMPLICATIONS FOR THE FUTURE

Although the life span perspective is generalist in its application to all human development, individuals belonging to vulnerable groups in society may have different developmental experiences. Women, people of color, and persons with disabilities progress through the same life stages but may process their experiences differently (Dwyer & Hunt-Jackson, 2002). Developmental researchers and practitioners have considered these differences, but more work in this area is necessary.

The universality of adolescent problems across cultures and countries has been documented in the Youth

Self-Report Form that was administered to adolescents from 24 countries in Europe, Asia, the Middle East, Africa, Australia, the Caribbean, and the United States (Rescorla et al., 2007). A striking degree of similarity was found across adolescents around the world. Within-country comparisons revealed that girls consistently and significantly reported more anxious/depressed problems and internalizing problems than did boys. Older adolescents reported significantly more rule-breaking behaviors than did younger adolescents, and adolescents reported significantly more problems than their parents reported. Mood swings, distractibility, self-criticism, and arguments were the most commonly noted individual items.

Mental health practitioners can benefit from these findings. Because the findings suggest the universality of problems, one might conclude that empirically based treatments for problems could share universal qualities. Also, as adolescents in most countries reported more problems than did their parents, those treating adolescents may find that facilitating adolescents' communication with parents could help family dynamics (Rescorla et al., 2007).

Relative to Roe-Sebowitz and Thyer's (2004) viewpoint that mental disorders whose etiologies include environmental, biological, familial, or peer factors may not be actual mental disorders, it is important to note that many obstacles and crises that affect children's and adolescents' mental health are as much a function of societal factors as they are of an individual's development. Therefore, it is imperative that responsible mental health practitioners combine their micro and macro practice skills to enhance individual functioning for their clients and societal functioning for future clients. Adjustments and accommodations must be made within the individual and within society to maximize each person's potential and the overall potential of American society. The Healthy People Consortium, representing an alliance of more than 350 national organizations and 250 state public health, mental health, substance, and environmental agencies, proposed a systematic approach to health improvement. The Consortium recognizes the determinants of health as individual biology and behaviors interacting within the individual's social and physical environments that in turn are affected by policies and interventions that may or may not result in improved health by targeting factors related to individuals and their environments, including access to quality health care (U.S. Department of Health and Human Services, 2000). Thus, the macro-level perspective appears to be most appropriate for research and practice in child and adolescent mental health.

The life span developmental approach to mental health in children and adolescents views the health, both physical and mental, of the individual as resulting from influences along the continuum that extends on either side of birth (Gluckman & Hanson, 2006). Regardless of their theoretical orientation (behavioral, cognitive, constructivist, or psychodynamic), practitioners should design and implement interventions that build on the strengths present in the individual. They are charged, moreover, with the responsibility to consider the individual within his or her social and political environmental context.

**SEE ALSO** Volume 1: *Drinking, Adolescent; Drug Use, Adolescent; Eating Disorders; Erikson, Erik; Freud, Sigmund; Health Differentials/Disparities, Childhood and Adolescence; Parent-Child Relationships, Childhood and Adolescence; Peer Groups and Crowds; Self-Esteem; Resilience; Socialization.*

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# MENTORING

The word *mentor* originates from Homer's *Odyssey*. As Odysseus departed for the Trojan War, he charged his infant son, Telemachus, to the care of his good friend Mentor. Mentor's role in Telemachus's development during Odysseus's many years away is typically portrayed as a wise protector, nurturer, and role model (Colley, 2003). It is this portrayal that serves as a foundation for current conceptions of mentoring relationships—as concerned, experienced individuals who care for and guide the development of someone younger and/or less experienced.

Mentoring has long been championed as a cure-all to the increasing complexity of life course trajectories because of its potential to buoy up and provide skills and training for youth, particularly the disadvantaged. This perspective is the basis of 21st-century mentoring movements such as Big Brothers Big Sisters, GEAR UP, the National Mentoring Partnership, and the emphasis on mentoring in U.S. President George W. Bush's Faith-Based Initiative. In short, many consider the promise of mentoring to be the achievement of the American Dream. Despite this ancient beginning, it has been relatively recently that mentors gained attention by those concerned with adolescent development.

## WHAT IS A MENTOR?

What exactly is a mentor? How can a mentor be identified? With the proliferation of mentoring programs in diverse settings and addressing a variety of issues, it is increasingly difficult to answer these questions. Current research does not provide a concise, coherent, and consensual definition of mentoring (Allen & Eby, 2007; DuBois & Karcher, 2005). Definitions range from very broad descriptions of functional benefits (e.g., emotional vs. instrumental) to more exact specifications about the details of the relationships (e.g., relative age of mentor and protégé or mentee, frequency of contact, or one-on-one vs. group contexts).

One helpful way to bring some clarity to the definition of mentoring is to categorize mentors along two dimensions: formal versus informal, and social versus functional role (see Table 1). *Formal* mentors are most often adults that the staff of mentoring programs match with adolescents and then provide a venue and/or schedule for their interaction (Rhodes, 2002). The key element that makes a mentoring relationship formal is that it exists as a result of the mentor and protégé coming together in the context of a formal organization. Thus, peer mentors who are older students paired with younger students through school-based programs, e-mentors who interact primarily with their mentees electronically, and group mentors who interact in settings involving more than one youth all fit this description.

| | Social Role | Functional Role |
|---|---|---|
| Formal | Yes | ? |
| Informal | No | Yes |

***Table 1.*** *Defining Mentoring Relationships.* CENGAGE LEARNING, GALE.

*Informal* mentors encompass youths' influential relationships with adults who are part of their naturally occurring social networks. They have been variously operationalized as important unrelated adults, individuals outside of the immediate family, very important persons, or role models. Importantly, a young person must identify an adult as influential to be classified as a mentor. The distinction of social and functional roles elucidates why this is so.

Hamilton, Darling, and Shaver (2003) introduced this distinction to studies of mentors. A social role is defined by the structure that connects two individuals. Thus, mentoring as a social role consists of a mentor and protégé participating in a formal organization. Any two individuals in such a relationship identify themselves accordingly, regardless of whether or not knowledge and skills are transferred or an emotional connection is established. On the other hand, a functional role is simply defined by the content of the relationship. Mentoring as a functional role involves doing what a mentor is supposed to do.

Consequently, mentoring as a social role necessarily goes along with formal mentoring, and as a functional role it corresponds with informal mentoring (see diagonal in Table 1). However, informal mentoring cannot coincide with mentoring as a social role (bottom left quadrant in Table 1). The social roles of informal mentoring consist of aunt–niece, teacher–student, and so on, and because these relationships develop a mentoring component through natural processes, the original social roles remain salient. Also, though an organization pairs two individuals, there is no guarantee that the relationship will accomplish what is intended. Informal relationships are successful by definition, but formal relationships require concerted effort and can exist without the relationship providing the intended functions (upper right quadrant of Table 1).

## HISTORY OF MENTORING RESEARCH

Late in the 19th and into the 20th century, the industrialization and urbanization of society disrupted existing pathways into adulthood for youth. New forms of

antisocial behaviors in youth accompanied these disruptions, resulting in the development of the juvenile justice system. It was in this context that the mentoring movement was originally born with the establishment of Big Brothers and Big Sisters organizations (Allen & Eby, 2007; DuBois & Karcher, 2005).

There has been a resurgence of interest in mentoring as globalization has once again changed the landscape against which young people come of age. Although organizations such as mentor/National Mentoring Partnership and Public/Private Ventures have fueled much of this recent interest in mentoring, two particular studies represent benchmarks of this renewed interest: Daniel J. Levinson and colleagues' *The Seasons of a Man's Life* (Levinson, Darrow, Klein, Levinson, & McKee, 1978) and Emmy E. Werner and Ruth S. Smith's (2001) Kauai Longitudinal Study.

*The Season's of a Man's Life* was an attempt to create a developmental perspective on adulthood in men and focused particularly on early and middle adulthood. Although a small number of men were studied, developing mentoring relationships emerged as a major task of early adulthood with the danger of future difficulties if they were not formed. Mentors served as sponsors and advisers. They were older than their protégés, but not so old to be out of touch with contemporary issues or to be in danger of being perceived as a parent figure. However, if they were too similar in age, their relationships could become too peer-like. Combining the best of both parental and peer relationships, mentors served to support the achievements necessary to successfully navigate the changing developmental demands of early adulthood.

Werner and Smith (2001) studied children from the 1955 cohort born on the island of Kauai who faced substantial prenatal, childhood, and adolescent risks to development. Despite experiencing these risks for extended periods throughout the life course, the majority of these children became well-adapted adults. Among the adults who managed to achieve "normal" levels of functioning in adulthood, each one identified support from at least one influential non-parental adult figure or mentor who was part of their network of informal relationships as an important factor in their resilience.

## DEMOGRAPHICS OF YOUTH MENTORING

Following these two studies, most research on mentoring relationships tends to focus on small samples that often have a particular risk profile or are disadvantaged in some particular way. This should not be surprising considering mentoring programs target these youth. Thus, the demographic profile of formal mentoring is a definitional issue—advantaged youth tend not to have formal mentors. The implication is that the advantaged youth do not need mentors because they already have access to rich resources in their social environment (e.g., parents)

Studies of informal mentoring have followed suit, typically using small, community-based samples of at-risk youth. Thus a broad picture of informal mentoring has been unavailable in the literature. Erickson and Elder (2007) reported a description of youth who identified informal mentoring relationships using the National Longitudinal Study of Adolescent Health (Add Health). Overall, three-quarters of young people reported having a mentor during adolescence. Those who were female, White, and lived with both biological parents during their adolescent years, and whose parents had more education, were more likely to report a mentor.

## THEMES AND THEORIES

A recurring question addressed in the mentoring literature is whether mentoring relationships provide emotional or instrumental benefits. This is an important issue for formal mentoring relationships: Organizations need to know whether to train their volunteers to develop emotionally supportive, therapeutic relationships or to engage youth in activities that will expand their knowledge and challenge them to develop new skills (Allen & Eby, 2007).

Researchers emphasize one or the other of these perspectives depending on which theoretical model they prefer. Those who stress emotional benefits typically draw on attachment theory or the risk and resilience perspective. Attachment theory (Bowlby, 1982) suggests that children construct relatively stable expectations of their environment or working models based on their early experiences with caregivers. Poorly attached children are anxious in social situations and tend to withdraw from social relationships. However, when a young person feels emotionally connected with a mentor, this can alter the working model, making the social world more of a welcoming place (DuBois & Karcher, 2005).

Within the risk and resilience tradition, resilience is defined as "a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar, Cicchetti, & Becker, 2000, p. 543). The search for mechanisms of resilience has led, among other things, to mentors. The social support provided by mentors is seen as a protective factor for at-risk youth that serves to buffer the potential effects of stress associated with risk.

Those who consider the instrumental aspects of mentoring relationships tend to emphasize concepts such as social capital. Although its definition and empirical applications vary, social capital can be defined as the ability of individuals to obtain some type of benefit through their social connections (Portes, 1998). Being

connected to a mentor provides access to information and opportunities that young people might be unaware of or unable to take advantage of. For example, a student who wants to go to college but whose parents never did may depend on a mentor for information on taking the right courses or filling out a college application. Mentoring relationships that are less emotionally laden may provide some benefits in instances such as these. Young people may see these mentors as more credible sources of information (e.g., providing more of an unbiased opinion), and they may feel more at ease exploring different aspects of the self without the risk of alienating an important source of emotional support.

Identifying whether emotional or instrumental support is what a particular youth might need seems a daunting task for large mentoring programs and could explain why program interventions show only modest levels of success (Hall, 2006; Rhodes, 2002). In informal mentoring relationships, this should be less of an issue: When youth identify influential people, the criteria they use depend on their own particular needs. Most likely, both emotional and instrumental aspects of mentoring relationships are important regardless of whether they are formal or informal, even if one may be more important than the other for different youth or at different points in the life course.

Pierre Bourdieu's ideas of habitus and field (Bourdieu & Wacquant, 1992) provide a foundation for understanding if, when, and how mentors might provide youth with their particular needs and can be applied to both formal and informal mentoring relationships (Colley, 2003). Habitus is essentially a system of dispositions that individuals develop throughout their lives in response to their experiences or position in various fields. A *field* represents any particular context in which an individual is given a position relative to other individuals and in which individuals have a stake in their position because it provides them with some advantage.

Formal mentors who attempt to improve youths' skills engage with them in a field that is in many ways foreign to those from disadvantaged backgrounds. A protégé may misunderstand a mentor's attempts to teach them skills that will be useful to them in situations to which they are not accustomed. For instance, problem-solving techniques (habitus) learned in gang-related settings (field) will likely not transfer to the educational realm, and it may be difficult for a mentor to successfully convey this to youth. Further, such efforts may be interpreted as disempowering by young people.

Informal mentoring relationships between youth and the kinds of adults that might be most helpful to them may never form because of dissimilarities in their habitus. Also, despite continuous social contact, the most helpful adults are likely located in different locations in a field, complicating arriving at shared meanings or understandings. However, it is precisely the fact that a potential mentor sees the world from a different (advantaged) position that adds value to the life of the adolescent. Therefore, if disadvantaged youth develop informal mentoring relationships at all, it may be with adults who could further socialize them into disadvantaged positions, whereas advantaged youth are socialized to achieve further advantage. A reproduction or even exacerbation of social inequalities could result.

## TO THE FUTURE

Because mentoring has been a particular focus of attention at the beginning of the 21st century, the future holds many possibilities for research, of which only a few are mentioned here. Very little is known about long-term consequences of mentoring relationships, although Werner and Smith's Kauai Longitudinal Study provides a notable exception. Although it did not focus on mentoring per se, it did identify mentors as an important component of resilient pathways well into adulthood. However, their study began with a particularly disadvantaged population. Later studies hold the promise of identifying long-term consequences of mentoring in normative populations.

Despite Levinson et al.'s (1978) endorsement of mentors, they also recognized the potential harm that mentors could have on development. However, until recently, most researchers ignored this possibility. Yet when it comes to formal mentoring relationships, neither mentoring as an abstract concept nor actual practice guarantee positive outcomes for youth. In particular, mentoring relationships that are of short duration tend to do damage to a youth's self-concept (Rhodes, 2002).

It has been more difficult to identify whether and when informal mentoring might have no influence or even negative consequences for youth. This is in part because informal mentors by definition have had a positive influence on youth, at least from the youth's perspective. However, preliminary evidence suggests that informal mentors within the school setting contribute more to the educational attainment of youth from disadvantaged backgrounds compared to more advantaged youth, whereas mentors who are relatives are associated with gains in attainment for more advantaged youth (Erickson, McDonald, & Elder, 2007).

With regard to both informal and formal relationships, there is a need for more research that examines the intersection of the characteristics of mentors and youth and how their relationships might help or hinder development across a variety of domains. For example, although informal mentors who are relatives may help

advantaged youth more in terms of educational attainment, it is possible that they may be more help to disadvantaged compared to advantaged youth in terms of emotional well-being.

**SEE ALSO** Volume 1: *Cultural Capital; Resilence; Social Capital.*

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# MIDDLE SCHOOL

**SEE** Volume 1: *Stages of Schooling.*

# MORAL DEVELOPMENT AND EDUCATION

Moral development is an area of study in the field of human development that deals with the ways in which people treat one another. Like any scientific endeavor, the study of human development has been characterized by a series of theoretical and empirical debates. One of the most important is the classic debate about nature versus nurture. Are people shaped ultimately by their internal biological components (nature) or by their social experiences in the world (nurture)? Most scientists would agree that neither is the sole propellant of human development but that an intricate and complex interaction of biological, psychological, and social factors shapes people's trajectory.

The same thing can be said about the way people develop morally. According to most traditions, moral development concerns the individual's socialization into the mores and practices of a family and a culture (nurture). From a cognitive developmental perspective, however, moral development has to do with an individual's construction of understanding through phases of development that are based on greater experience and maturation (nature and nurture). Further, from a developmental systems perspective the individual develops in interaction with the various networks of experience—family, school, neighborhood—adapting to local contexts (nature and nurture in a complex, multilayered interaction).

## HISTORICAL PERSPECTIVES

Moral development has been studied systematically since Lawrence Kohlberg (1927–1987) advanced developmental psychology by extending the work of the then-unknown Swiss psychologist Jean Piaget (1896–1980). Like Piaget, Kohlberg focused on moral judgment as part of a long-standing focus on reasoning in European and American approaches to moral philosophy and behavior. Adopting a deontological (duty-based) framework, Kohlberg expanded Piaget's two orientations to six stages that progress in an invariant sequence. According to Kohlberg, moral reasoning develops though a leveled, stagelike progression in thinking over time. Individuals progress from preconventional thinking through conventional and on to postconventional thinking (preconventional level: (a) avoid punishment, (b) prudence and simple exchange; conventional level: (c) interpersonal harmony and concordance, (d) law and order; postconventional level: (e) social contract, and (f) universal moral principles).

Kohlberg used an interview method that included the presentation of moral dilemmas as prompts to ascertain the level or stage of moral judgment. In the classic Heinz dilemma, a poor man named Heinz cannot afford

**Eleven Principles of the Character Education Partnership**

**(Lickona, Schaps & Lewis, 2003)**
**Effective character education...**

Principle 1. Promotes core ethical values as the basis of good character.

Principle 2. Defines "character" comprehensively to include thinking, feeling and behavior.

Principle 3. Uses a comprehensive, intentional, proactive and effective approach to character development.

Principle 4. Provides students with opportunities for moral action.

Principle 5. Creates a caring school community.

Principle 6. Includes a meaningful and challenging academic curriculum that respects all learners, develops their character and helps them succeed.

Principle 7. Strives to foster self-motivation.

Principle 8. Engages school staff as a learning and moral community that shares responsibility for character education and attempts to adhere to the same core values that guide the education of students.

Principle 9. Fosters shared moral leadership and long range support of the character education initiative.

Principle 10. Engages families and community members as partners in the character building effort.

Principle 11. Evaluates the character of the school, the school staff's functioning as character educators, and the extent to which students manifest good character.

***Table 1.*** *Eleven Principles of the Character Education Partnership.* CENGAGE LEARNING, GALE.

a costly medicine for his ailing wife. Because Heinz cannot persuade the druggist to discount the price, he considers breaking into the pharmacy and stealing the medicine to save his wife. After thinking about the dilemma, students articulate why Heinz should or should not take the medicine from the pharmacy.

Over many decades, the work of Kohlberg and his colleagues as well as neo-Kohlbergian research programs have uncovered a cross-cultural trajectory of the development of moral reasoning over the course of early life through early adulthood. Progress through Kohlberg's moral judgment stages is influenced primarily by age and cognitive development throughout primary and secondary schooling. Adolescence offers a unique developmental context for studying the development of moral judgment. As an adolescent develops a sense of society and obligations to it, several key transitions can be noted. In high school the individual transitions from a personal orientation (doing what is convenient for oneself or for maintaining friendships) to a societywide view (follow laws to maintain order).

In college individuals move toward postconventional thinking (determine together what laws should govern people; Rest, Narvaez, Bebeau, & Thoma, 1999). Those with more higher education, especially postgraduate education in philosophy, tend to receive higher scores on interviews and tests such as the Defining Issues Test (DIT). The DIT presents a dilemma and then a series of statements that represent different Kohlberg stages for participants to rate and rank in importance (e.g., for the Heinz dilemma: Isn't it only natural for a loving husband to care so much for his wife that he'd steal?). Higher scores on the DIT are related to more effective professional behavior, such as a democratic classroom orientation in teachers (Rest & Narvaez, 1994).

Kohlberg and Piaget were criticized for underestimating the degree to which children understand morality. Elliott Turiel (1983) and colleagues discovered an understanding of social convention (e.g., use a fork to eat) versus natural morality (e.g., do not hurt people) in children as young as 3 years. Kohlberg's findings also were criticized for weak correlations with actual behavior; individuals often do not act in a manner that is congruent with their moral reasoning or judgment. In contrast, Nancy Eisenberg and colleagues (1999) mapped empathy and prosocial development through childhood, finding significant links to altruistic and prosocial behavior.

The narrowness of Kohlberg's approach to moral development (as moral reasoning about justice) has given way to a greater diversity of views and topics. One of the best-known critiques was that of Carol Gilligan (1982), who proposed that females take a different path in responding to moral dilemmas. She asserted that females are more oriented toward relationships and the care of others, an orientation that she claimed was not represented adequately in Kohlberg's justice-oriented framework. Although research findings have not supported her claims for gender differences in reasoning, the view that justice reasoning is sufficient to explain moral development in all people was problematic for multiple philosophical, psychological, and cultural reasons (Rest et al., 1999).

## PROMOTING MORAL DEVELOPMENT

The field of moral development is diverse; empirical and theoretical evidence highlights the complex interaction of the social, psychological, and biological components of moral formation and development. For example, evolutionary and primate psychology has provided a new view of moral development that includes evolved propensities for reciprocity, empathy, and violence that also are found in other primates (de Waal, 1996). Jonathan Haidt (2001) underscored the importance of emotion and intuition in making moral judgments about others. Darcia Narváez (2008) integrated neurobiology into a moral

psychological theory called triune ethics that highlights the importance of early care for optimal and evolutionarily expected "moral brain" development.

One of the most promising areas of research on moral development is moral motivation. Although individuals may know the right and good choice to make in any specific situation, they still may fail to act accordingly. Augusto Blasi (1994) attempted to explain this by pointing to the importance of moral identity and moral personality in driving moral action. Anne Colby and William Damon (1992) noted that those who were considered moral exemplars for their contributions to their communities merged their personal with their moral goals. Their moral goals were central to their sense of self. For example, in one case, after becoming aware of her racist background as unjust, one exemplar made working for social justice her life's work. Other work shows how adolescent moral exemplars also include moral goals and moral traits in their self-descriptions (Hart, Yates, Fegley, & Wilson, 1995). In studying the emergence of morality in childhood, Kochanska (2002) mapped the development of conscience, showing the importance of warm, responsive parenting. In his view the source of commitment to moral concerns is mutual, positive, secure relationships with caregivers. Moral identity is deeply relational and is strongest among students who bond to school, work in caring school communities, and form strong attachments to teachers.

## MORAL EDUCATION

Social scientists who study moral development often are interested in the application of their findings to moral education. For example, Kohlberg did not think only about outlining moral development; he also was interested in formulating "just community" schools in which students would practice democratic rule, facing everyday dilemmas together. In his application of moral development to education Kohlberg joined a long tradition. Educators, philosophers, and researchers have been interested in the appropriate structure and content of moral education for thousands of years. Early Greek philosophers such as Cicero, Plato, and Aristotle debated the definition and best practice of moral formation. Educators in 18th- and 19th-century Europe and the United States assumed that it was best to teach moral values based in Christian theology and Greek philosophy; in fact, the Christian Bible formed the primary text for that moral curriculum.

The religious-based method of moral education in schools was challenged by social realities (i.e., increased religious heterogeneity) and scientific studies (i.e., the Character Education Inquiry of 1928–1939, which did not find cross-situation consistency in moral traits such as honesty). That resulted in a shift in the debate on moral education away from the primary school classroom and into academia: What works for developing moral character?

As science is brought to bear on the question, key factors are being uncovered and integrated into educational interventions. An example of positive integration between the empirical study of the academy and the real-world concerns of the classroom is the Character Education Partnership, a coalition of individuals and organizations that provides resources, support, and advocacy for individuals and institutions committed to integrating character education in the school curriculum. The partnership has constructed the Eleven Principles for Character Education, which represent the core principles for designing and enacting school communities committed to character education and are embraced by many schools and districts across the country.

## SPECIFIC MORAL EDUCATION PROGRAMS

Social scientists have developed innovative and empirically tested programs to promote healthy moral development in educational contexts. For example, Rest's (1985) four-component model delineates three processes beyond moral judgment that are required for moral behavior: moral sensitivity (noticing and interpreting what is happening and imagining alternative choices), moral motivation or focus (prioritizing the moral action), and moral action skills (knowing what steps to take and persevering). This model has been useful for envisioning what effective moral character education might entail. The first component—sensitivity, empathy, and perspective taking—became particularly important in U.S. education at the end of the 20th century and the beginning of the 21st. Many programs emphasize a caring and developmentally supportive classroom and social and emotional learning or address empathy development directly. For example, the Collaborative for Academic, Social, and Emotional Learning (CASEL) advocates five core social and emotional competencies: self-awareness, social awareness, self-management, responsible decision making, and relationship skills. These types of programs emphasize the development of emotional intelligence.

One of the premier moral character education programs of the late 20th century is the Child Development Project (CDP). Developed in the 1970s and 1980s by social scientists and educators, CDP is a comprehensive, multicontext program designed to foster moral and prosocial development for elementary school age children. The CDP focuses on the structure of the home and school communities to promote peer collaboration,

inclusive membership, and value sharing. Adult exemplars model caring, supportive relationships, foster a caring community among children, and guide children through the CDP curriculum (perspective taking, values sharing, moral discussions, and so on). Participants in CDP programs have demonstrated increased positive prosocial skills and dispositions such as sense of community, care for others, and academic engagement (Battistich, Solomon, Watson, & Schaps, 1997). The work of the CDP is carried on by the Developmental Studies Center.

The most useful viewpoint in approaching any aspect of children's development is a developmental systems orientation that "draws attention to embedded and overlapping systems of influence that exist at multiple levels; to the fact that dispositional coherence is a joint product of personal and contextual factors that are in dynamic interaction across the life course" (Lapsley & Narvaez, 2006, p. 271). The most effective character education programs will be situated within the framework of developmental science but also will work within a dynamic model of ecological systems in which the child is embedded (e.g., family, school, neighborhood, and global communities). Such programs not only will help children develop skills and resiliency but also will strengthen the positive networks in which a child resides. In fact, positive youth development programs often take that perspective.

With an emphasis on thriving as a basis for taking an ecological systems approach, Richard Lerner, Elizabeth Dowling, and Pamela Anderson (2003) wrote that "an integrated moral and civic identity and a commitment to society beyond the limits of one's own existence enables thriving youth to be agents both in their own healthy development and in the positive enhancement of other people and of society" (p. 172). The Search Institute, an independent nonprofit organization, has developed a list of 20 external assets (e.g., caring school climate, service to others, and adult role models) and 20 internal assets (e.g., bonding to school, honesty, and sense of purpose).

Communities have adopted asset-building practices. Young people with a greater number of assets are less likely to engage in risky and delinquent behavior (e.g., alcohol use, violent behavior) and more likely to thrive (get good grades in school) and serve others. In fact, service learning can be a potent force for moral development. More than isolated acts of volunteerism, service learning aims to coordinate multiple contexts (school, home, neighborhood) and perspectives (personal, other, social justice) within a series of experiences in which individuals do something good for someone else. When embedded in a caring classroom, aligned with educational objectives, and enacted within the larger community, service learning has been shown to increase student agency, responsibility, and awareness across all grade and age levels and continue into adulthood (Youniss, McLellan, & Yates, 1997). Programs inspired by positive youth development such as thriving, positive asset development and service learning are congruent with the aims of moral character education.

The developmental, cognitive, and educational sciences provide an important foundation for moral character education. In fact, the cognitive sciences allow people to see that a false dichotomy is created when one separates reasoning from virtue, as rational moral education and traditional character education are perceived to have done. To develop expertise in moral functioning (sensitivity, judgment, focus, action) both deliberative reasoning and virtues are required. That view is integral to the Integrative Ethical Education model (Narvaez, 2006), which draws together the direct methods of virtue cultivation associated with traditional character education and the deliberative reasoning development associated with rational moral education.

Within a context of high expectations and support, teachers implement five steps (ideally, simultaneously):

1. Educators establish a caring bond and secure attachment with each student, which is one of the most important protective factors that mitigate poor outcomes for a child.
2. Educators establish a caring classroom climate supportive of achievement and ethical character.
3. Ethical skills for each of the four components (ethical sensitivity, judgment, focus, action) are taught across the curriculum and through extracurricular activities; educators design instruction according to the following four levels of novice-to-expert pedagogy: (a) immersion in examples and opportunities, (b) attention to facts and skills, (c) practice procedures, (d) integration of knowledge and procedures.
4. Educators foster student self-regulation, promoting self-authorship for purposeful development.
5. Educators facilitate democratic and asset-building communities by linking to parents and the local community, promoting an integrated civic identity.

This research-based framework offers a comprehensive and empirically derived integration of contemporary developmental and educational sciences.

## FUTURE DIRECTIONS

Future research on moral development will incorporate the neurosciences. For example, attachment is deeply neurobiological and is more fragile than was understood

previously, yet it is vital for lifetime brain development and emotion regulation. As an example, care-deprived infants develop aberrant brain structures and brain-behavioral disorders that lead to greater hostility and aggression toward others (Kruesi et al., 1992). When caregivers respond and become attuned to the child's needs and moods and when parents coregulate their moods, the child is likely to be more cooperative and develop a good conscience. Neuroscience research opens a window onto the physical results of child neglect that are related to problems with moral behavior.

Moral formation and development are affected by a myriad of social, psychological, and biological factors. Innovative research on those interrelated factors is essential for the continued study of moral development and the advancement of moral education.

**SEE ALSO** Volume 1: *Developmental Systems Theory; Genetic Influences, Early Life; Piaget, Jean; Religion and Spirituality, Childhood and Adolescence.*

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# N

## NEIGHBORHOOD CONTEXT, CHILDHOOD AND ADOLESCENCE

Research on the importance of neighborhood contexts examines how the characteristics of the places people live matter for their well-being. While social research has long shown that individual characteristics and family resources and social processes are associated with child and adolescent outcomes, since the late 20th century researchers have increasingly focused on the neighborhood of residence as an additional, meaningful determinant of child and adolescent development (Elliott et al., 2006). Neighborhoods are important contexts to consider for youth, because children and adolescents are transitioning through stages of development that may make them vulnerable to contextual influences. Consequently, neighborhoods may be key contexts for youthful residents, whose negotiation of these transitions may make them more receptive to both the beneficial and the detrimental aspects of their residential environments.

### NEIGHBORHOOD EFFECTS RESEARCH

Neighborhood effects research examines how emergent properties of residential contexts can have effects on people above and beyond their own characteristics. Initial contextual research was based on Clifford Shaw's and Henry McKay's (1942) theory of social disorganization, which focused on the demographic and political-economic characteristics of neighborhoods, such as the roles of residential segregation, ethnic diversity, and relative neighborhood advantage. This research found considerable evidence that aspects of neighborhood disadvantage had negative effects on child and adolescent outcomes, such as child maltreatment, delinquency, teenage childbearing, and low IQ (Brooks-Gunn, Duncan, & Aber, 1997).

Subsequent researchers have sought to identify the social properties of neighborhoods that link disadvantage or demographic characteristics to child and adolescent well-being (Sampson, Morenoff, & Gannon-Rowley, 2002). This research draws on the work of William Julius Wilson (1987; 1996), who noted that social change in inner-city neighborhoods, such as the withdrawal of local industry (and its consequent effects on local employment opportunities), brought about decline and social disadvantage in urban neighborhoods. Disadvantaged neighborhoods—those with high rates of poverty, unemployment, residential instability, family disruption, and racial or ethnic heterogeneity, for example—are hindered in their ability to achieve levels of social organization that are thought to increase the life chances of child and adolescent residents. Similarly, in such neighborhoods, orientations toward crime, risk behavior, and problem behavior may be culturally transmitted, affecting child and adolescent behavioral choices. Neighborhood effects research considers how these aspects of social organization and cultural transmission serve as mechanisms that link neighborhood levels of economic disadvantage with child and adolescent outcomes.

### NEIGHBORHOOD SOCIAL ORGANIZATION

Social organization approaches examine the factors that limit neighborhood residents' ability to work together

***Changing Neighborhood.*** *Alkali Flat, once known for drug dealing and transiency, is one of many core city neighborhoods across California that have experienced a revitalization as long commutes and soaring rents have brought new home buyers to areas that would have been unthinkable a few years ago.* AP IMAGES.

toward common goals, including healthy child and adolescent development. Much of the research on social organization has its basis in the literature on social capital, which is the capacity for action on behalf of an individual or group that inheres through networks of social relationships (Coleman, 1990). In the context of the neighborhood, social capital can be employed for the benefit of local youths in a number of ways: it can facilitate the informal social control of children and adolescents; it can be used to draw beneficial institutional resources into the neighborhood; and it can be employed to prevent or lower residents' exposure to harmful agents, such as environmental hazards (Leventhal & Brooks-Gunn, 2000). Residents of economically and socially disadvantaged neighborhoods are less able to develop these networks of social relationships and as a result are hindered in their ability to amass social capital.

**Collective Efficacy** Robert Sampson and colleagues (1997) identified the concept of collective efficacy to explain how social capital may be recognized and then employed to the benefit of neighborhood residents. Collective efficacy captures the extent of mutual trust among neighborhood residents, along with shared expectations for action in support of neighborhood goals. In the case of children and adolescents, collective efficacy is most often employed through the supervision of youth, and intervention in support of informal neighborhood social control. Researchers have examined the role of collective efficacy with regard to a variety of child and adolescent outcomes, such as sexual risk behavior, problem behavior, and health outcomes (Browning, Leventhal, & Brooks-Gunn, 2005). This research has found evidence for a negative relationship between neighborhood levels of collective efficacy and problem behavior and poor health outcomes.

**Institutional Resources and Environmental Hazards** Researchers have also identified the importance of social capital as a means to attract and retain institutional resources that are beneficial for neighborhood residents (Elliott et al., 2006). Neighborhoods that are highly socially organized and are able to exploit extended social ties to decision makers outside the neighborhood may be able to influence the placement of desirable institutions (such as health care facilities, community centers, and police and fire substations) within the neighborhood. As a result of

the proximity of these desirable institutions, child and adolescent well-being may increase. In addition, residents of socially organized neighborhoods may be better able to work together to reduce the number and type of hazards and risks to which local youths are subject. These types of risks include physical disorder (such as the presence of broken glass, litter, or biohazards), social disorder (such as public intoxication or prostitution), or the placement and regulation of harmful institutions proximate to the neighborhood (such as industries that pollute).

## CULTURAL TRANSMISSION

An alternative to the social capital approach is one that focuses on the concentration or proliferation of behaviors or influences in neighborhoods as detrimental to child and adolescent well-being—in some neighborhoods, delinquency and problem behavior may be so prevalent as to seem normal, or an expression of a neighborhood subculture, and may be taken up by children and adolescents through a process of social learning. These approaches are typically thought of as subcultural or epidemic approaches (Anderson, 1990), and are rooted in early theories of crime and gang delinquency (Cloward & Ohlin, 1960). Under the cultural transmission perspective, the proliferation of problem behaviors and crime in a neighborhood setting provides access to delinquent and problem behavior opportunities, and thus serves as an illegitimate opportunity structure for the local youth that stands in opposition to legitimate opportunity structures (such as schooling and legal employment) in mainstream society. In disadvantaged neighborhoods, these illegitimate opportunity structures present an alternative path for children and adolescents who are blocked from mainstream opportunities for success.

## NEIGHBORHOOD MEASUREMENT AND ANALYSIS

**Methodological Considerations** Several methodological considerations are key to the examination of neighborhood effects. The first of these is the definition of *neighborhood.* Researchers have employed different definitions of this term, such as administrative boundaries (census tracts or blocks) (Sastry et al., 2006); areas delimited by streets, railroad tracks, and other ecological boundaries (Sampson et al., 1997); people's social networks (Wellman & Leighton, 1979); and residents' subjective definitions of their socio-spatial neighborhood (Lee & Campbell, 1997).

A second key consideration is endogeneity, or selection bias. Parents of children and adolescents select the neighborhoods in which their families will live. The same characteristics that lead parents to select certain neighborhoods in which to live may also influence their children's development. As a result, observed neighborhood effects may be attributable instead to these unmeasured parental characteristics (Brooks-Gunn, Duncan, & Aber, 1997). Researchers attempt to address this issue through careful control of individual and family characteristics associated with neighborhood selection, more advanced methods for dealing with selection bias in statistical models (such as the use of propensity scores), and quasi-experimental research designs that attempt to randomly assign families to neighborhoods with certain characteristics.

One such quasi-experimental design is that used in the Moving to Opportunity (MTO) experiments, sponsored by the U.S. Department of Housing and Urban Development, in which some residents of disadvantaged neighborhoods were given housing vouchers to live in more advantaged contexts. The goal of this experiment was to assess whether moving residents to more advantaged residential contexts improved outcomes for them and their children. The results of this research are, to date, mixed with regard to child and adolescent outcomes. The most striking finding is that girls whose families "moved to opportunity" were more likely than girls in a control group to graduate from high school and to refrain from delinquency and problem behavior. These same benefits were not experienced by male children, however, who fared no better or worse on most measures of well-being than boys in a control group, indicating that there may be gender differences in the ways that children experience and make use of the opportunities presented to them in their residential contexts (Kling & Liebman, 2004).

**Neighborhood Analysis** Neighborhood effects research considers both structural aspects of neighborhoods (disadvantage, residential stability, and racial and ethnic diversity or heterogeneity) and social aspects of neighborhoods (the extent of collective efficacy and the presence of delinquent or problem behavior subcultures). One key concern that researchers must address, then, is the measurement of these concepts. With regard to structural characteristics, researchers often use demographic information derived from the census. For example, disadvantage may be measured by the proportion of households in the neighborhood that are below the poverty line, the proportion of single- or female-headed households, the percent unemployed, and the percent on public assistance. Residential stability is often measured by the percentage of residents living in the same house for a set period (often 5 or 10 years) prior to the study, as well as the percent of housing occupied by owners. Finally, researchers use information on the racial and ethnic composition of the neighborhood to measure racial and ethnic heterogeneity (diversity).

In contrast to these structural measures, measures of social processes are often derived from residents' responses to questions on community-based surveys. These responses

***Impoverished Neighborhood.*** *Research has found considerable evidence that aspects of neighborhood disadvantage has negative effects on child and adolescent outcomes, such as child maltreatment, delinquency, teenage childbearing, and low IQ.* AP IMAGES.

are aggregated by neighborhood to form a composite neighborhood measure of these social processes. Collective efficacy, for example, has often been measured using information provided by survey respondents on both informal social control processes in their neighborhoods and the extent of social cohesion among residents (Sampson, Raudenbush, & Earls, 1997). Informal social control of children and adolescents has been measured by the extent that survey respondents agree that neighborhood residents would intervene if they saw children skipping school and hanging out on the street corner, spray painting graffiti on a local building, showing disrespect to an adult, or if there was a fight in the neighborhood and someone was beaten or threatened. Social cohesion is often measured by information on the extent to which people in the neighborhood are willing to help neighbors, can be trusted, get along, and share the same values, as well as whether the neighborhood is close-knit.

In addition to these measures, researchers have noted the importance of considering the composition and form of neighborhood social networks, or whether residents have parties and get-togethers, visit with one another, ask one another advice about important matters such as job openings and child-rearing practices, and do favors for one another. Another important network of social relationships is described by the term *intergenerational closure*, or the extent to which parents in a neighborhood know their children's friends, and the parents of their children's friends, and can be counted on to watch out so that children are safe and do not get into trouble. Intergenerational closure can ensure that information about children's behavior may be shared among parents, increasing opportunities for effective supervision and monitoring, and addressing behavioral problems early. At the same time, however, neighborhood networks and relationships may also have the opposite effect—complex relationships and competing social obligations may complicate residents' willingness to intervene when children and adolescents are misbehaving (Browning, Feinberg, & Dietz, 2004).

Measures of local subcultures and cultural transmission processes are also derived from community surveys. These measures often include information on the extent to which residents are tolerant of various forms of deviance and problem behavior, such as residents' opinions regarding how wrong it is for adolescents to smoke

cigarettes, use marijuana, drink alcohol, and get into fistfights (Browning, Feinberg, & Dietz, 2004). These measures allow researchers to take into account whether problem behaviors are more or less acceptable in different neighborhoods, which may affect children's and adolescents' decisions to engage in delinquency and problem behavior and the opportunities for such behavior.

## THE FUTURE OF NEIGHBORHOOD EFFECTS RESEARCH

The upsurge in research on neighborhood effects has been driven, in part, by improvements in both statistical software and survey design. First, multilevel statistical models can be executed readily through the use of a variety of software programs that allow researchers to account for the clustering of residents within neighborhoods (Raudenbush & Bryk, 2002). Second, surveys have been specifically designed to examine the effects of sociospatial contexts on individual residents, such as the Project on Human Development in Chicago Neighborhoods (PHDCN) and the Los Angeles Family and Neighborhood Survey (L.A.FANS). Third, researchers have tried to capture both objective and subjective aspects of neighborhood contexts. For example, PHDCN researchers videotaped the neighborhoods in their Chicago study, and used a systematic rating system to record the extent of physical and social disorder in the neighborhoods. This method of systematic social observation (SSO) resulted in rich data that researchers are using to assess a broader range of neighborhood effects on resident well-being (Sampson & Raudenbush, 1999).

Research on neighborhood effects is proceeding in ways that consider places other than residential location that are important to children and families, such as school, work, and child-care contexts. Certainly, there is considerable overlap between school and neighborhood contexts; schools often draw students from the neighborhood or proximate neighborhoods. As a result, neighborhood disadvantage is often mirrored by school disadvantage—further concentrating disadvantage for children and adolescents in these contexts. However, school contexts can and do differ from neighborhood contexts, and researchers are now beginning to consider cross-classified models that allow for the simultaneous examination of the school and the neighborhood, even when the school is not nested within the child's or adolescent's neighborhood of residence.

Finally, researchers are considering a more fluid definition of *neighborhood*, and are taking into account the social influence of adjacent neighborhoods and shared ties across neighborhoods (Pattillo-McCoy, 1999). This research has shown the importance of ties across neighborhoods and spatial dependencies, as crime and problem behavior in adjacent or related neighborhoods can affect crime and problem behavior in the focal neighborhood. Through these and other approaches, researchers hope to capture a better understanding of how residential contexts and collective social processes serve to promote child and adolescent well-being.

The insights gleaned from neighborhood effects research are thus important for purposes of shaping future social policy. Researchers are increasingly able (as in the MTO study) to provide insight on the types of community interventions that may help to shore up deficits in disadvantaged neighborhood contexts and among poor families. Efforts to increase social capital and collective efficacy for residents, such as increasing opportunities for community residents to come together in support of neighborhood goals, may be of particular significance if they allow residents to recognize shared values and develop a common view that they can work together to effect community change and foster resident well-being. Community-based programs can be implemented that bring about these types of relationships among adults, and can also produce opportunities for intergenerational relationships in which neighborhood adults supervise children's sports or cultural activities. As policies and programs informed by neighborhood effects research are put into place, future evaluative research may be used to identify and refine the most successful community-based approaches for healthy child and adolescent development.

**SEE ALSO** Voume 1: *Poverty, Childhood and Adolescence; Social Capital; Residential Mobility; Youth;* Volume 2: *Neighborhood Context, Adulthood;* Volume 3: *Neighborhood Context, Later Life.*

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## NO CHILD LEFT BEHIND

SEE Volume 1: *Policy, Education.*

## NURSERY SCHOOL

SEE Volume 1: *Child Care and Early Education.*

# O

## OBESITY, CHILDHOOD AND ADOLESCENCE

Childhood and adolescence are generally very healthy life-course stages in the United States, and relatively few children suffer from major, life-threatening diseases. However, one serious health condition has grown increasingly common since the mid-1970s: childhood and adolescent obesity. Data analyzed for a study published in the *Journal of the American Medical Association* in 2006 indicates that slightly more than half of 2- to 19-year-olds in the United States weigh more than what is medically considered to be a normal weight: 33.6% are overweight and another 17.1% are obese (Ogden et al., 2006). Obesity places young people at risk for a wide range of physical, psychological, and interpersonal problems during childhood, adolescence, and adulthood. It also places an economic burden on society.

### DEFINING OVERWEIGHT AND OBESITY

Calculating body mass index (BMI) from children's and adolescents' weight and height is the most common way that clinicians and researchers determine whether young people are overweight or obese. BMI is computed using one of the following formulas: BMI = weight (lb) / [height (in)]$^2$ × 703 or BMI = weight (kg) / [height (m)]$^2$. BMI is generally considered a reliable measure of body fatness among young people.

For children and adolescents, BMI assessments are age- and sex-specific to take into account the fact that the amount of body fat children have varies by their sex, age, development, and growth. Therefore, BMI scores are converted into age- and sex-specific percentile rankings of BMI to represent boys' and girls' BMI relative to other children of the same sex and age using the Centers for Disease Control and Prevention's (CDC) BMI-for-age growth charts. The CDC publishes two separate growth charts to calculate BMI percentiles for girls ages 2 to 20, and boys ages 2 to 20.

The CDC classifies children's and adolescents' age- and sex-specific BMI percentile according to four weight categories that represent underweight (BMI scores that fall below the 5th percentile of age- and sex-specific scores), normal weight (BMI scores in the 5th through and 84th percentile), at risk of overweight (BMI scores that fall above the 85th percentile and below the 95th percentile), and overweight (BMI scores that fall above the 95th percentile). The percentile cutoffs for at risk of overweight and overweight correspond to physical and psychological health risks known to be associated with the body fatness levels represented by these high BMI percentiles.

The CDC labels for children's and adolescents' weight classifications do not directly correspond to CDC labels for adults' weight classifications. The adult equivalent of the label "at risk of overweight" is "overweight," and the adult equivalent of the label "overweight" is "obese." The conscious decision to use different labels for young people and adults who weigh more than what is clinically considered normal is the result of concerns that young people who are labeled as obese will face more stigmatization than those labeled as overweight. This decision is controversial, and many experts are now calling for continuity in the labels used to describe children, adolescents, and adults whose weight is above a medically

normal range to better reflect the gravity of the health problems associated with body fatness levels that are this high. In 2005 the Institute of Medicine (IOM) recommended that children and adolescents with BMI scores above the 95th percentile be classified as obese. In December 2007 an expert panel of pediatricians endorsed the IOM's recommendation in one of the top U.S. academic pediatric health journals and also added that children and adolescents with BMI scores that fall at or between the 85th and 94th percentiles should be classified as "overweight," not "at risk of overweight" (Barlow & Expert Committee Panel, 2007).

## ASSESSING BODY FATNESS

BMI scores are generally more reliable when they are determined by actual measurements of height and weight rather than children's and adolescents' self-reported height and weight. Self-reported weight is more subjective than measured weight, is confounded with weight perceptions (Brener, Eaton, Lowry, & McManus, 2004), and is prone to misreports by respondents dissatisfied with their weight (Elgar, Roberts, Tudor-Smith, & Moore, 2005). Girls are also likely to underreport their weight (Ge, Elder, Regnerus, & Cox, 2001).

Estimating BMI is the most common way that clinicians and researchers assess body fatness among children and teens because it is cost-effective and simple. Other methods of measuring body fatness include:

1. measuring waist to hip ratios to determine body fat concentrated in the abdomen;
2. skin-fold tests, which involve pinching skin and fat tissue at designated body sites to gauge body fat;
3. hydrostatic underwater weighing, a procedure that compares individuals' weight measured under water in a specialized water tank to their weight on land to gauge their percentage of body mass that is body fat;
4. dual-energy x-ray absorptiometry (DEXA), which uses x-ray technology to perform a total body scan on individuals to determine the proportion of their body mass that is bone, lean muscle, and body fat;
5. other medical screening procedures that differentiate between body fat and lean muscle mass such as magnetic resonance imaging (MRI) and computed tomography (CT) scans.

The more complex strategies for assessing body fatness such as hydrostatic underwater weighing, DEXA, MRI and CT scans are capable of more accurately differentiating between children and adolescents who have high BMI scores because they have a high concentration of lean muscle mass versus body fat, but they are not practical technologies for large-scale use because of their complexity and expense. Measuring body fatness using skin-fold tests and measurement of waist to hip ratios also have drawbacks. Skin-fold testing is prone to error, and measurements of waist to hip ratios only provide information about the fatness in one area of the body.

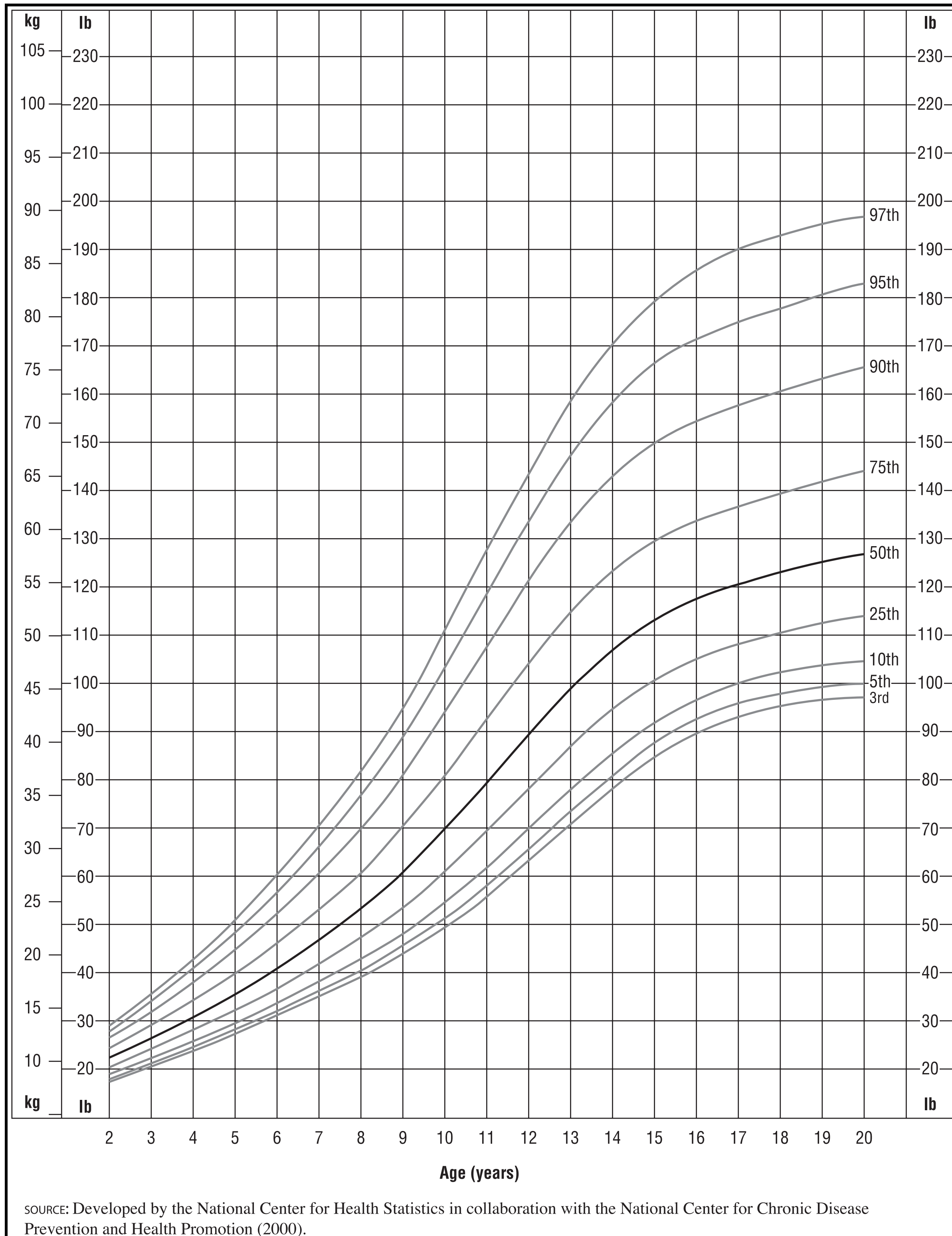
## TRENDS IN CHILDHOOD AND ADOLESCENT OBESITY

Paralleling trends among U.S. adults, the prevalence of childhood and adolescent obesity has been rising steadily since the 1970s. Analysis of the National Health and Nutrition Examination Surveys (NHANES), one of the most comprehensive sources of data on U.S. adult and childhood health and nutrition, indicates that the prevalence of obesity has doubled among boys and girls ages 2 to 5 and tripled among boys and girls ages 6 to 11 and 12 to 19 from the early 1970s to 2000 (Ogden, Carroll, & Flegal, 2003). More specifically, the study found that only 5% of boys and girls ages 2 to 5 were obese in 1970–1974 but by 2000, roughly 10% of boys and girls ages 2 to 5 were obese. Among 6- to 11-year-olds and 12- to 19-year-olds, roughly 5% of boys and girls were obese in the early 1970s, whereas roughly 15% were obese in 2000.

The most recent estimates of childhood and adolescent obesity using NHANES data from 2004 indicate that 18.2% of boys and 16.0% of girls ages 2 to 19 are now obese (Ogden et al., 2006). Estimates published in the same source also indicate that the prevalence of obesity among boys and girls varies by age and race/ethnicity, with Black and Hispanic children more likely than their White peers to be heavy. Among boys and girls, the prevalence of obesity is lowest among the youngest children. Among 2-to 5-year-olds, 15.1% of boys and 12.6% of girls are obese; among 6- to 11-year-olds, 19.9% of boys and 17.6% of girls are obese; and among 12- to 19-year-olds, 18.3% of boys and 16.4% of girls are obese. Exact estimates of racial/ethnic differences in prevalence depend on how one defines racial/ethnic categories. Comparisons of young people from the three largest racial/ethnic groups in the U.S indicate that a higher proportion of non-Hispanic Black (20.0%) and Mexican American (19.2%) youth ages 2 to 19 are obese than White (16.3%) youth in the same age range (Ogden et al., 2006).

## CONSEQUENCES OF OBESITY

Research on childhood and adolescent obesity tends to focus on either its consequences or its causes. Studies document a range of physical, psychological, and social consequences associated with the condition. These consequences are the primary reason why policy makers, researchers, and clinicians view childhood and adolescent obesity as a major social and public health problem. The




SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).

***Figure 1.*** *Weight–age percentiles for boys, 2–20 years.* CENGAGE LEARNING, GALE.

serious consequences of childhood and adolescent obesity also explain why research on the correlates of obesity and obesity prevention among youth has flourished since 2003.

Obese children and adolescents are at elevated risk for serious physical health problems during childhood, adolescence, and adulthood. They are more likely than normal-weight children to become obese adults. They also are likely to develop serious medical conditions that decrease quality of life and life expectancy, including Type II diabetes, high blood pressure, coronary heart disease, asthma, obstructive sleep apnea, and liver disease (Daniels, 2006). Obese female adolescents also are at risk of developing polycystic ovary syndrome, which is a condition that causes problems with women's reproductive systems, including irregular (or no) menstrual cycles, ovarian cysts, and infertility.

Because weight is a physical characteristic that is easily observed by others, obese children and adolescents are also likely to be stigmatized or teased. Experiments show that young people attach many negative characteristics to overweight individuals and are likely to rate them as being unhealthy, ugly, lazy, dirty, and stupid (Crandall & Schiffhauer, 1998). Children and adults also report a bias against befriending an obese person relative to people with other stigmatizing physical characteristics (Latner, Stunkard, & Wilson, 2005). Thus, it is unsurprising that obese adolescents are likely to report a range of psychological problems, including poor self-esteem, social isolation, loneliness, nervousness, anxiety, and suicidal thoughts and attempts.

Socially, obese adolescents report problems establishing and maintaining relationships with friends and romantic partners. In a study of adolescents attending a single high school in New England, obese adolescents were more likely than normal-weight adolescents to be mistreated by peers, obese boys and girls reported dissatisfaction with dating relationships, and obese girls were more likely than normal-weight girls to report that they were not dating (Pearce, Boergers, & Prinstein, 2002). Other research using data from two nationally representative samples of adolescents suggests that obese adolescent boys and girls are less likely to date than normal-weight boys and girls and that they are also less likely to have sex (Cawley, Joyner, & Sobal, 2006).

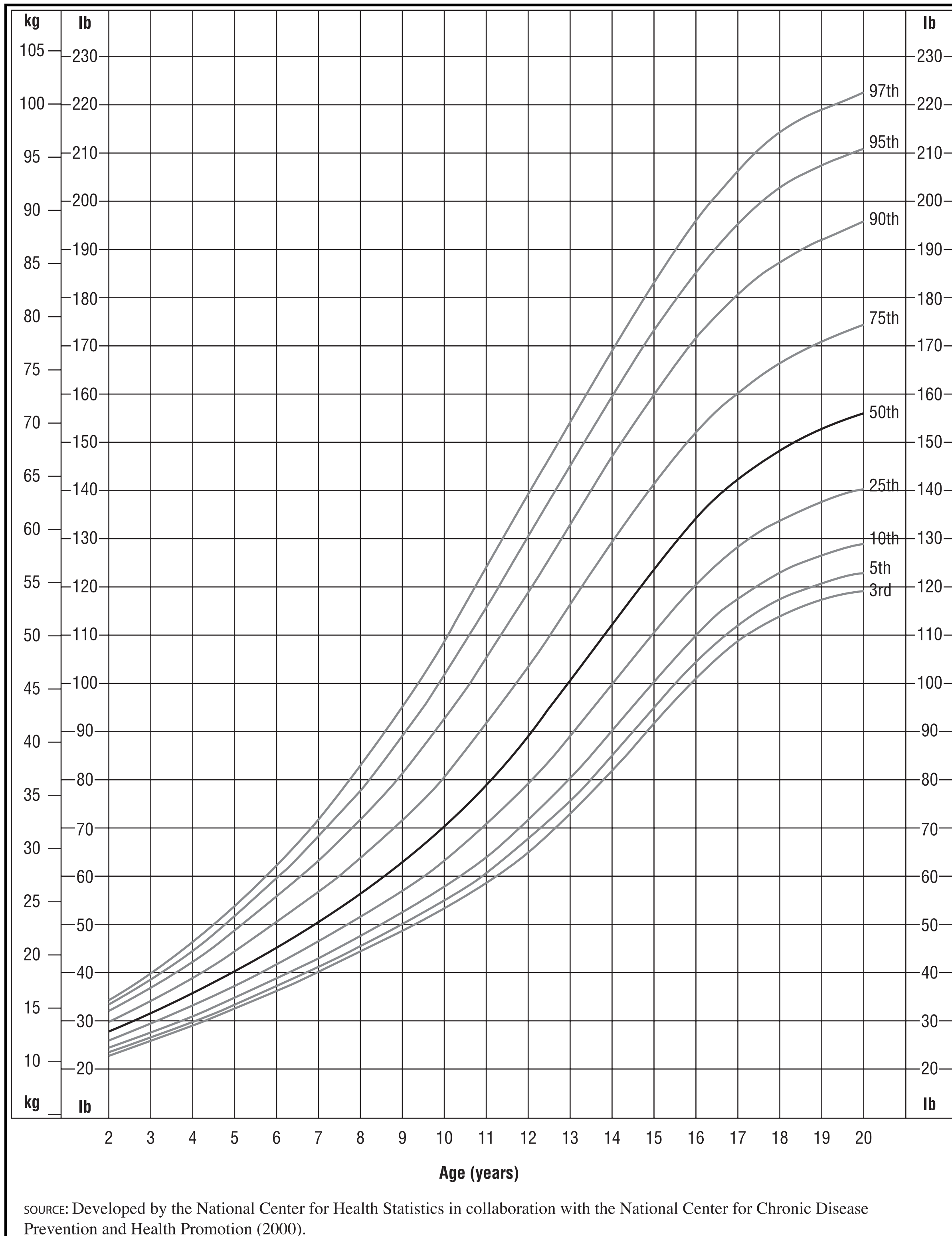
The consequences of childhood and adolescent obesity are not limited to individuals. It also takes a toll on U.S. society. In 2001, the U.S. Surgeon General indicated that obesity may be responsible for as many preventable illnesses and deaths as cigarette smoking. A recent assessment indicates that the number of hospital discharges of children between the ages of 6 and 17 that involved an obesity-related condition increased dramatically from 1979 and to 1999 in the United States and that hospital costs associated with treating these conditions rose from $35 million to $170 million (Wang & Dietz, 2002). As currently obese children and adolescents grow up and the prevalence of obesity increases, the burden that obesity places on the U.S. health care system and health care costs is expected to rise.

## CAUSES OF OBESITY

The range of negative consequences of being obese as a child or adolescent has led to research focused on understanding which children and adolescents are most likely to become obese. On the surface, the answer is simple. A pound of body weight is equivalent to approximately 3,500 calories. Young people who consume 3,500 more calories than they can burn through regular physical activity and body functioning gain weight. The more excess calories that young people consume, the greater the likelihood that they will eventually become obese. Therefore, the formula for decreasing the prevalence of childhood and adolescent obesity is ensuring that young people eat less and are more physically active. When the factors implicated in the rising prevalence of childhood and adolescent obesity are examined, though, it becomes clear that this is not an easy task.

Although the role of genetics in one's likelihood of becoming obese has received increasing attention and certain genes have been associated with body weight regulation, the nature of the relationship between genetics and obesity is not well understood. Furthermore, there is increasing agreement that only a small proportion of children and youth are genetically predisposed to becoming obese and that the rise in childhood and adolescent obesity has occurred too quickly to be explained by genes alone given the relatively slow nature of human evolution. Therefore, it is acknowledged that children and adolescents with obese parents are more likely to be obese, but there is a growing recognition that this family resemblance in weight likely reflects a family similarity in physical activity, diet, and lifestyle.

Large-scale societal changes also have contributed to the rising prevalence of childhood and adolescent obesity. For example, most Western nations, including the United States, have experienced a nutrition transition. This refers to major changes in a population's diet and levels of physical activity (Popkin, 2002). The result is a population that has ready access to a food surplus and a food supply that contains a greater abundance of fatty foods, highly processed foods, preprepared food, restaurant foods, and soft drinks. There is also a trend toward more sedentary versus active leisure time activities for children and adults; video games are replacing baseball as an afterschool activity, for example. These changes in




SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).

***Figure 2.*** *Weight–age percentiles for girls, ages 2–20.* CENGAGE LEARNING, GALE.

diet and physical activity largely result from economic development, modernization, and technological advances that make food production, transportation, work, and sedentary leisure activity easier. The result of these societal changes in diet and activity is an increasing prevalence of obesity and obesity-related diseases.

The United States has not only experienced the nutrition transition; it also has little government regulation over the types of foods that food companies place on supermarket shelves and how foods are marketed to consumers compared to many other Western countries. Many advocacy groups argue that marketing food to children in the media and in schools should be limited or banned altogether because it influences food choices in ways that lead to a high consumption of calorie-dense food with low nutritional quality. Review articles and books provide excellent overviews of food advertising in the media and schools to youth and its link to childhood and adolescent obesity (e.g., Nestle, 2003). These pieces indicate that corporations spend billions of dollars on advertising food to children and that more than half of all food advertisements youth view on television are marketing sweets, fats, soda, or fast food. These studies also outline the marketing techniques that food corporations use to target children in schools. They include direct advertising via television programming; advertising in school publications; ads placed on school equipment, supplies, buses, and facilities; and product sales in school vending machines, in cafeterias, at school events, and as fundraisers.

Such societal-level trends contribute to high population-level prevalence of childhood and adolescent obesity, but research has also shown that within the U.S. population, some children and adolescents are at a greater risk of becoming obese than others. Factors such as where children live and their socioeconomic and racial/ethnic background are also important.

With respect to U.S. geography, the prevalence of obesity among children and adolescents is higher in some geographic areas than others. Analysis of data from a nationally representative sample of children ages 10 to 17 in 2003 indicated that a greater proportion of children in southeastern states are overweight or obese, whereas the lowest prevalence of childhood overweight and obesity is evident in the central Rocky Mountain states (Tudor-Locke, Kronenfeld, Kim, Benin, & Kuby, 2007). When smaller geographic areas are compared, different analysis of the same data source indicates that youth living in rural areas also are more likely to be obese than youth living in metropolitan areas even when confounders indicating race, gender, income, leisure activities, and health care are controlled (Lutfiyya, Lipsky, Wisdom-Behounek, & Inpanbutr-Martinkus, 2007). Researchers also have begun to investigate how physical characteristics of neighborhoods, such as the presence of parks, sidewalks, fast-food restaurants, grocery stores, convenience stores, crime, and violence, influence the prevalence of childhood and adolescent obesity. A review of this literature indicates that these neighborhood characteristics influence children's physical activity levels and diet, but neighborhood characteristics have not yet conclusively been tied to youth obesity.

Children's demographic characteristics such as their race/ethnicity, family income, and parents' education level also are related to their likelihood of being an obese child or adolescent. Generally, this research shows that ethnic minority children and adolescents and those who are economically disadvantaged are at greater risk of obesity than their more advantaged peers. For example, data presented above indicates that Mexican Americans and non-Hispanic Blacks are more likely to be obese than Whites. Compared to Whites, the prevalence of childhood and adolescent obesity is also higher among Native Americans and U.S. Pacific Islanders and lower among other Asian American groups. Among ethnic minority youth, those who are immigrants are less likely to be obese than those born in the United States. With respect to income, youth living in poverty are more likely to be obese than youth not living in poverty, but the relationship between income and childhood obesity is not the same for White, Mexican American, and Black youth. Among Whites and Mexican Americans, the likelihood of obesity among 2- to 19-year-olds declines as family income rises, but among Blacks, the likelihood of obesity rises as family income rises (Freedman et al., 2007). In general, parents' education is also inversely related to weight.

## FUTURE RESEARCH DIRECTIONS

Future research will continue to focus on identifying the causes and consequences of childhood and adolescent obesity. The primary purposes of these studies will be documenting the multifaceted ways in which obesity influences children's lives and the reasons why some children are at greater risk of becoming obese than others. Because obesity is a social problem, a public health problem, and a medical condition, more research is needed that focuses on both the causes and consequences of childhood and adolescent obesity and that draws from the expertise of multiple disciplines. Future research also must explore the reasons why some young people—especially those from disadvantaged backgrounds—are more likely to become overweight, so that effective interventions can target these children and adolescents. Research attention must also be given to effective ways to prevent childhood and adolescent obesity in a culture in which overconsumption of food and sedentary behavior are normal.

**SEE ALSO** Volume 1: *Body Image, Childhood and Adolescence; Eating Disorders; Health Behaviors, Childhood and Adolescence; Health Differentials/Disparities, Childhood and Adolescence; Illness and Disease, Childhood and Adolescence;* Volume 2: *Obesity, Adulthood.*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# OPPOSITIONAL CULTURE

The oppositional culture theory is a framework used to explain group differences in academic performance among youth. It is more formerly known as the *cultural-ecological theory* or *resistance model*. The theory has received a great deal of attention among academic scholars, teachers, other school personnel, and the mainstream press. It was developed by the Nigerian American cultural anthropologist John U. Ogbu (1939–2003), who was interested in exploring differences in academic outcomes between minority and nonminority groups in the United States and other societies. Ogbu (1978) went on to refine the oppositional culture theory to include an explanation for achievement differences among minority groups.

Ogbu's framework has two major components and several tenets. Prior to a summary of the research on the oppositional culture theory, the major components of the theory are discussed, followed by a description of how groups are classified within the framework, which is a prerequisite for understanding the theory. This entry concludes with a brief discussion on directions for future research. Because most research on the oppositional culture theory has focused on samples within the United States, the summary of research is limited to the American context.

## COMPONENTS OF THE THEORY

The oppositional culture theory relies on two components to explain racial or group differences in achievement: (a) societal and school forces and (b) community and individual-level forces. These factors coincide, respectively, with the *ecological* (environment) and *cultural* portions of Ogbu's cultural-ecological framework. The first factor captures the unfair treatment members of minority groups typically face within a given society. Ogbu noted that minority groups are systematically denied access to educational opportunities equal to those received by the dominant group. They also experience barriers to success in future employment and earnings because of racial or ethnic discrimination and structural inequalities, which Ogbu referred to as the *job ceiling*. Thus, minorities are precluded from competing for the most desirable roles in society on the basis of individual

training and abilities. Even after a society abandons formal mechanisms responsible for the unequal treatment of minority groups, vestiges of past discriminatory policies in the labor market and education remain in effect.

Differential access to opportunities triggers community forces among minority groups, which corresponds with the second component of the oppositional culture theory. Ogbu (1978) noted that motivation for maximizing school achievement results from the belief that more education leads to better jobs, higher wages, higher social status, and more self-esteem. When members of minority groups encounter barriers within the opportunity structure—the system by which people acquire resources that determine their socioeconomic mobility (up or down)—they develop the perception that they receive lower rewards for education than the dominant group. These perceptions give rise to community and individual-level forces characterized by an oppositional culture that includes resisting educational goals. Ogbu described a *cultural inversion* that takes place whereby some minority groups define certain behaviors, in this case achievement, as inappropriate for them because they are the domain of their oppressors. This repudiation is marked by truancy, lack of serious efforts and attitudes toward school, delinquency, and even early school withdrawal altogether.

The effect of societal and community forces are not the same for all minority groups. Their effects are especially acute for members of subordinate minority groups—groups who have historically been specific targets of exclusionary policies. These groups occupy a subordinate status in stratification systems—the societal systems in which people are arranged hierarchically according to their social class and access to resources—more rigid than systems of stratification based entirely on acquired social class. Ogbu referred to these groups as *castelike minorities*. Ogbu (1978) published a comparative assessment of differences in school achievement among minority groups in six countries (Britain, India, Israel, Japan, New Zealand, and the United States) and found that subordinate minorities exist in each context.

The societal-level (ecological) and community-level (cultural) forces provide a general understanding of how societal forces influence individual-level behaviors to produce achievement differences between dominant and minority groups across numerous contexts. These components, however, do not allow for distinctions to be made between different minority groups. As discussed above, although all minority groups in general experience and perceive some form of barriers to upward mobility, not all minority groups respond similarly. As such, Ogbu refined his framework to include a minority classification scheme useful for understanding the variability among different minority groups.

## GROUP CLASSIFICATION

Within the oppositional culture framework, minority groups are placed into three distinct classifications: autonomous minorities, voluntary minorities, and involuntary minorities. Autonomous minorities are groups that may be small in number and/or different in race, ethnicity, religion, or language from the dominant group. Voluntary or immigrant minorities are groups who willingly move to a host country. Typically, these groups immigrate in search of better opportunities in employment or greater political or religious freedom. In contrast, involuntary minorities are groups who have been historically enslaved, colonized, or conquered, and thereby interpret the incorporation of their group into their host country as forced by the dominant group.

Because this framework is used to understand racial differences in achievement within the United States, race is often used as a proxy for group classification. Examples of autonomous minorities include the Amish, Jews, and Mormons; examples of voluntary minorities include Asian Americans and West-Indian Americans; and examples of involuntary minorities include African Americans, Hawaiians, and Native Americans. That African Americans are involuntary minorities and immigrant Blacks (e.g., Caribbean Americans) are voluntary minorities shows that not all Blacks have the same minority status. Group classification does not necessarily correspond with race. Nevertheless, researchers typically use Asian Americans, Blacks, and Whites to represent voluntary, involuntary, and dominant groups, respectively.

A group's place within the classification scheme is not always obvious. Although most Hispanic groups within the United States are either immigrants or descendants of immigrants, Ogbu claimed that Mexican Americans—who comprise nearly two-thirds of the Hispanics living in the United States (Therrien & Ramirez, 2000)—are involuntary minorities. He argued that they feel alienated from American society because they have bitter memories of their incorporation into the United States via American imperialistic expansion in the 1840s. Nevertheless, roughly 50,000 Mexican nationals remained within the newly acquired U.S. territory, a small fraction of the more than 35 million people of Mexican ancestry currently in the United States; most Mexican Americans are therefore immigrants or descendants of immigrants who arrived after the Mexican revolution of 1910 (see Jaffe, Cullen, & Boswell, 1980). Because nearly all Hispanic children in American schools derive from voluntary immigration, Ogbu's classification of this group as involuntary minorities is highly implausible.

## GROUP CLASSIFICATION AND SCHOOLING RESPONSES

The minority classification scheme is useful for understanding why ethnic minority groups differ in their

schooling behaviors and, subsequently, school achievement. With regard to autonomous minorities, despite experiencing some discrimination they are not dominated or oppressed and have levels of school achievement similar to the dominant group. Therefore, this group is not discussed within the oppositional culture literature.

Members of voluntary minority groups view education as the primary mechanism through which the opportunities that led them to immigrate can be realized. Therefore, they fail to adopt counterproductive schooling behaviors or attitudes and often overcome experiences of discrimination and difficulties in school to do well academically. Their distinction from the dominant group in culture, language, and social or collective identity are characterized by *primary cultural differences*—differences that existed prior to their immigration and acquisition of minority status. These groups understand that their cultural ideals are distinct and view learning aspects of the dominant group's mainstream culture as necessary for success. Thus, they attribute the barriers they initially experience to cultural differences and interpret them as temporary obstacles to overcome. In addition, with no history of being targeted for oppression by the dominant group, they are more trusting of them and their institutions for upward mobility.

As noted earlier, involuntary minorities hold caste-like minority status, which means that they experience greater and more persistent forms of discrimination. They perceive themselves as direct targets of the barriers to success with regard to future employment and earnings. As such, they become disillusioned about the future and begin to doubt the value of schooling. They hold *secondary cultural differences*—differences that emerge after two groups have been in continuous contact, particularly when the contact involves one group's domination over another. Whereas cultural differences from the dominant group for immigrant minorities are based on *content*, for involuntary minorities they are based on *style*. Therefore, they see these differences as markers of group identity to be maintained.

In sum, the oppositional culture theory claims some minorities adopt counterproductive schooling behaviors because of the knowledge or belief that the system of social mobility has been rooted in educational and occupational discrimination based on group membership. Ogbu's group classifications are useful for identifying which minority groups adopt counterproductive schooling behaviors and for understanding why minority groups differ in their responses to societal barriers. Thus, the major premise of the oppositional culture theory is that the prevailing system of social mobility greatly determines achievement motivation and behavior largely through students' beliefs about the opportunity structure. Ogbu viewed the lower academic performance of involuntary minorities as an adaptation to the barriers they encounter. As discussed below, the scientific evidence on the oppositional culture theory is mixed.

## PREVIOUS RESEARCH

There are three primary strands of research on the oppositional culture theory. One focuses on whether societal conditions affect individuals' achievement via perceptions about the opportunity structure (Ford & Harris, 1996; Mickelson, 1990). These studies find that students who believe in the achievement ideology (i.e., education leads to status attainment) experience academic successes, whereas those who challenge this belief do not. Studies also show, however, that Blacks are capable of maintaining high academic achievement or orientation despite beliefs in structural barriers within the opportunity structure for members of their group (O'Connor, 1999; Tyson, Darity, & Castellino, 2005). Also, whereas some studies find Blacks perceive fewer returns to education than Whites (Fordham & Ogbu, 1986; Mickelson, 1990; Ogbu, 2003), others find that Blacks believe in the achievement ideology (e.g., Ainsworth-Darnell & Downey, 1998; Harris, 2006; O'Connor, 1999).

A second strand of research focuses on the community or cultural component of the theory. Specifically, these studies examine whether minorities differ from Whites on oppositional schooling attitudes and behaviors. With regard to attitudes, a common finding of previous studies is that Blacks express greater pro-school attitudes than Whites (e.g., Ainsworth-Darnell & Downey, 1998; Cook & Ludwig, 1997; Harris, 2006). Some scholars argue, however, that these studies do not distinguish between academic (i.e., abstract) and practical (i.e., concrete) attitudes (Mickelson, 1990). Whereas abstract attitudes (e.g., education is important) reflect dominant ideology regarding the ideal role of education, concrete attitudes are rooted in life experiences and inform achievement behavior. Research by Mickelson (1990) shows that (a) abstract attitudes have no effect on grades, (b) concrete attitudes have a positive effect, and (c) Blacks hold less positive concrete attitudes toward education than Whites, which she attributes to the material realities they experience that "challenge the rhetoric of the American Dream" (p. 59). Thus, Mickelson's research raises the importance of distinguishing between different types of attitudes.

With regard to schooling behaviors, studies generally find that racial differences exist on oppositional schooling behaviors. Specifically, these studies find that relative to the dominant group (Whites), voluntary minorities (Asian Americans) have more productive schooling behaviors (i.e., exert more effort in school, spend more time on homework, get in trouble less, and

are less disruptive), and involuntary minorities (African Americans) have less productive school behaviors (Ainsworth-Darnell & Downey, 1998; Harris & Robinson, 2007). They also find that these behaviors are related to achievement in the expected manner and partially account for racial differences in achievement. Harris and Robinson (2007) found, however, that the hypothesized and estimated effects of oppositional schooling behaviors on academic achievement are overestimated because of the omission from the framework of students' skill level prior to the theory's applicability—around middle school when youths begin to learn about and understand the opportunity structure (see Ogbu, 2003, pp. 41, 154).

The third strand of research is on the tenet that has received the most attention among researchers: the *acting White* hypothesis. This hypothesis posits that the primary mechanism by which Blacks resist educational goals is by equating academic success with acting White. There is some evidence for this hypothesis (Fordham & Ogbu, 1986; Ogbu, 2003). Fryer and Torelli (2005) found that the phenomenon has a significant effect on Black student achievement in schools with high interracial contact and among high-achieving students but little or no effect in predominantly Black or private schools. Other studies show Blacks do not experience greater social cost for high achievement than Whites; these studies suggest Blacks' peer groups are not monolithic and allow space to affirm academic identity (e.g., Carter, 2005; Horvat & Lewis, 2003; O'Connor, 1999; Tyson, Darity, & Castellino, 2005). In fact, Carter (2005) found that negative sanctioning for acting White is driven by a rejection of generic American, "White" middle-class behavioral styles with regard to such things as interaction, speech, dress, and musical tastes rather than academic achievement. In sum, people interested in employing the oppositional culture theory should carefully weigh the evidence on both sides of the debate. The lack of consensus within the scientific community suggests further research is necessary before the theory can be adopted or rejected.

## DIRECTIONS FOR FUTURE RESEARCH

There are several directions for future research on the oppositional culture theory. First, although adequate schooling remains a serious obstacle for many Hispanics, researchers have not incorporated them into the oppositional culture literature. Their lower school achievement as immigrants or descendents of immigrants makes their group classification within the framework unclear. Thus, future research is necessary to determine why, despite their reality as immigrant minorities, their schooling experiences resemble that of involuntary minorities within the United States.

Second, few studies assess the oppositional culture theory among younger students. The theory was developed with reference to high school students. Studies among Black children in elementary school show they begin school very much engaged and achievement-oriented but that the schooling experience plays a central role in the development of negative schooling attitudes (Tyson, 2002, 2003). In addition to poor achievement, a strong emphasis on transforming many aspects of Black children's culture by school officials inadvertently communicates inadequacy associated with *Blackness* (Tyson, 2003). Black children's negative attitudes toward schooling may reflect desires to avoid further failure in school rather than the maintenance of an oppositional culture. Similarly, other studies have found that students' academic skill-sets determine both their schooling behaviors and later achievement (Harris & Robinson, 2007). Future research should determine when perceptions about the opportunity structure become consequential for school achievement and schooling behaviors.

Finally, more research is needed on the oppositional culture theory in non-U.S. contexts. Although the framework was partially developed based on Ogbu's (1978) comparative assessment across several countries, few researchers have attempted to replicate his original conclusions. Studies based on non-U.S. populations may help to further refine the theory and generate new propositions for the framework.

**SEE ALSO** Volume 1: *Cultural Capital; Immigration, Childhood and Adolescence; Peer Groups and Crowds; Racial Inequality in Education; Socialization, Race.*

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**Angel L. Harris**

# P

## PARENT-CHILD RELATIONSHIPS, CHILDHOOD AND ADOLESCENCE

The parent-child relationship is unique among human relationships. Parent-child interactions are among the most common interactions during a child's formative years. This relationship is nonvoluntary and endures over the life course. Because of the obligatory interdependence involved in child rearing, even if the relationship is stressed, parents and children rarely sever their ties completely, as sometimes happens with friendships (Maccoby, 2003).

Scholars have examined parent-child relations at various developmental stages, including infancy, early childhood, middle childhood, adolescence, and even adulthood. Research has focused on the ways children are affected by diverse aspects of parent-child relations, such as parenting styles, parenting practices, parental characteristics and behaviors, child characteristics and behaviors, mutual influences between parents and children, parent-child interactions, mother's versus father's influence, and cultural and ethnic influences. Researchers widely agree that the quality of parent-child relationships plays a significant role in children's intellectual, social, emotional, and behavioral development (Cox & Harter, 2003). Parent-child relationships not only have an impact on children's development during childhood and adolescence but also affect their socioeconomic success and psychological well-being throughout the life course.

### HISTORICAL TRENDS IN RESEARCH ON PARENT-CHILD RELATIONS

Research on parent-child relationships can be divided into two eras: before bidirectionality and after bidirectionality (Kuzynski, 2003). The before bidirectionality period encompasses studies conducted before the late 1960s, when research focused on identifying parenting strategies, practices, behaviors, styles, and traits that might influence children's outcomes, such as competence, healthy development, school achievement, and problem behaviors. Although these topics continue to be of interest to scholars, early studies largely ignored mutual interactive processes in which parents and children influence each other. In the period since the late 1960s, the after bidirectionality period, researchers started to pay attention to the reciprocal or mutual influences between parents and children. In that period scholars began to recognize that both parents and children act as "agents" in socialization processes; that is, both generations are capable of being goal-oriented, initiating intentional behaviors, reflecting about interactions, interpreting situations, resisting requests, and blocking each other's goals (Bell, 1968, Kuczynski & Parkin, 2007). In contrast to the earlier, more simplistic top-down approach that emphasized parental effects on children's outcomes, a bidirectional perspective recognizes that parents and children together contribute to the processes that shape children's outcomes.

Research and theory adopting the unidirectional approach experienced a second surge in the 1980s and early 1990s. That resurgence, led by behavioral geneticists, turned earlier unidirectional research on its head by exploring the ways in which children's traits elicited specific responses and practices from parents (Harris,

1998, Rowe, 1994). Behavioral geneticists asserted that children's different genetics caused parents to respond to them differently, which affected parent-child interactions and subsequent child outcomes. Those studies compared and contrasted siblings who differed in the degree of genetic relatedness, such as identical versus fraternal twins. Researchers found that genetics plays an important role in shaping children's characteristics and explaining similarities in how brothers and sisters turn out. At the same time they found a powerful influence of the siblings' unshared environment, that is, the unique environments and experiences of each sibling. Unshared environment may encompass factors such as parents' distinctive responses to each child's unique traits and peer or teacher influences on each child. Interestingly, behavioral geneticists reported that the influence of shared environmental factors on child outcomes was minimal; those factors encompass aspects of family life that brothers and sisters share, such as the parents' economic status and attitudes toward child rearing.

On the basis of those studies the behavioral geneticists concluded that parents have little or no long-term influence on children's behavior or personality. This bottom-up orientation elicited strong reactions from many researchers, who challenged the assumptions and methodologies used in behavior-genetic studies; those researchers then set out to document evidence that parents do in fact matter for child outcomes (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000).

Although the findings are often controversial, the key ideas of behavioral genetics have had a strong influence on research on parent-child relationships. Contemporary scholars have accepted several of their assertions, especially the observation that children's genetic makeup plays an important role in shaping parent-child interactions and consequently the types of parent-child relationships that ultimately develop. To evaluate parental influence fully, however, researchers must take into consideration the ways in which parenting may be affected by children's original differences in temperament and abilities (Maccoby, 2007).

Contemporary scholars generally agree that a bidirectional view provides a more compelling explanation of parent-child relations than does either of the unidirectional approaches. In particular, researchers are calling for efforts to study both children's influence on parents and parents' influence on children. This is based on the assumption that in any long-term relationships both parties develop expectations for each other. Through repeated actions and reactions a culture emerges that includes mutually shared views, values, memories, goals, expectations, and rules that worked and rules that did not work. Ongoing daily interaction is based on this shared culture. Thus, the contextually based mutually influential relationship between parents and children is the major force influencing a child's outcomes (Maccoby, 2003).

## PARENT-CHILD RELATIONSHIPS AND CHILD OUTCOMES

Early parent-child relationships are an important topic of inquiry for developmental psychologists. The overall quality of early parent-child relationships reflects the levels of warmth, security, trust, positive affect, and responsiveness in the relationship. Warmth is recognized almost universally as a fundamental component of parent-child relationships. Children who have a warm relationship with their parents report feeling loved and thus develop a strong sense of self-confidence. They typically trust and enjoy participating in shared activities with their parents. Their confidence facilitates their exploration of the environment and development of competence. Children who are in warm relationships with their parents also tend to identify with the parents and thus usually are willing to cooperate or comply with parental demands. Warmth in the relationship creates a context of positive affect, which tends to enhance the mood of those who are involved and makes them more attentive and responsive to each other (Laible & Thompson, 2007).

Security is another central dimension of parent-child relationships, especially among young children. Attachment theory (Bowlby, 1969), one of the most important theories of child development, was developed to characterize parent-infant relationships. Its basic premise is that the primary function of an infant's attachment behavioral system is to obtain and keep the caregiver at times of need. The caregiver's availability, sensitivity, and responsiveness to an infant's signals or calls for help make the infant feel secure. Infants' repeated interactions with caregivers lead to the development of an internal working model; this refers to an internal representation of attachment, including images of the self and others as well as expectations for interaction in close relationships. A child's confidence grows from his or her feelings of security, feeling that the environment is safe, viewing others as loving and kind, and valuing one's self. Subsequent research has confirmed the importance of the attachment relationship, which continues beyond infancy and early childhood. Attachment ties with parents during the later stages of childhood and adolescence continue to provide a supportive foundation for the development of competence and psychological well-being (Armsden & Greenberg, 1987).

An important area of research that developed during the bidirectional period focuses on the connection between parent-child interactions and the relationship

they form. Robert Hinde's work has had an important influence on research on parent-child relations. According to Hinde, the basic components of a relationship are interaction and time. Two individuals who interact over a period of time form a relationship, with each interaction having an impact on the ones that follow. Repeated interactions lead to the establishment and development of a relationship, and that relationship influences the frequency and nature of subsequent interactions (Hinde & Stevenson-Hinde, 1988).

Several main principles form the base of interaction models of parent-child relations. The three core principles are as follows:

1. Interaction. Parents and children interact over time and thus create their relationship. At any point in time the relationship consists of only one interaction that occurs in the present moment, together with many memories of past interactions and anticipations of future interactions.
2. Mutual contribution. Parents and children both play a part in their interactions and thus the relationship.
3. Distinctiveness. Each parent-child relationship is unique for the involved dyad and cannot be replicated by a relationship with another parent or child. Two additional principles characterize the "time" dimension: (a) Past expectations. Prior interactions between the parent and the child are building blocks for their current expectations. On the basis of his or her past experiences and observations, a parent has a solid understanding of how a child is likely to act in a specific situation. The child also has expectations about how the parent will act. (b) Future anticipations. Because parent-child relationships are enduring, both parents and children expect a future, which is built into their interactions (Hinde & Stevenson-Hinde, 1988, Lollis, 2003).

Establishing a healthy parent-child interaction pattern in early childhood has important implications for subsequent stages, especially for the potentially problematic parent-child interactions that often emerge during adolescence.

## PARENT-CHILD RELATIONSHIPS AND OUTCOMES DURING ADOLESCENCE

In many families, parent-child relationships undergo substantial changes when a child reaches adolescence. A common perception in American society is that adolescence is a period of storm and stress, that is, a period of biologically determined upheaval and disturbance. Classical psychoanalytic perspectives view adolescent storm and stress as normative (Freud, 1969, Blos, 1962). Anna Freud (1969) claimed that adolescent upheaval is both necessary and desirable for personal growth. Peter Blos (1962) viewed adolescence as a process of individuation; at this time teenagers must experience an emotional disengagement from their parents before establishing new social and emotional bonds outside the family. However, empirical research reveals that adolescence is not necessarily a stage of upheaval. To the contrary, the actual proportions of conflict-ridden families found in nonclinical populations are much lower than what advocates of the psychoanalytic perspective predicted (Hill & Holmbeck, 1986).

The view of adolescent storm and stress as entirely biologically based, universal, and inevitable has been rejected by most scholars. Empirical data provide more persuasive support for what might be called a modified version of the storm and stress hypothesis. This perspective acknowledges that conflicts with parents, mood disruptions, and risky behaviors are more likely to occur during adolescence than in any other stage of the life course (Arnett, 1999). Adolescent arguments with parents usually focus on mundane matters such as curfews, bedtimes, dating, hair, clothing, friends, and chores rather than on fundamental values. However, parents are likely to be upset by daily bickering and often remain distressed, whereas adolescents tend to brush it off and recover quickly from the negative interactions (Steinberg, 2001). One reason for this pattern is that parents and adolescents define conflict differently. Whereas parents tend to think about an issue such as keeping the room clean in moral or social conventional terms of right and wrong, adolescents tend to see it merely as an indicator of personal choice (Smetana, 1989).

Researchers note that conflicts may serve as a warning signal for parents to modify and adjust their interactions with their teenage children. For example, parental monitoring is still necessary when children are adolescents, yet parents need to modify the degree and extent of supervision to adapt to a child's developmental changes. Monitoring is also more effective if it is conducted within a close parent-child relationship and if the adolescent is cooperative and willing to let the parents know his or her whereabouts and with whom he or she is associating (Kerr & Stattin, 2003).

Adolescent behaviors such as being secretive may be a result of earlier parental reactions. For example, an adolescent may have shared with his or her parents worries about problems encountered at school or with peers, and the parents may have responded with unsympathetic criticism, mockery, or disciplinary actions. Even worse, parents may have used the disclosed information against the adolescent at a later time. As a result, the adolescent

becomes increasingly guarded and refrains from disclosing further information. This makes parents even more suspicious about what might be concealed and less likely to trust the adolescent, who in turn may become more deceptive. That negative cycle is often a result of earlier failed interactions (Maccoby, 2007).

## PARENTING STYLES

Research on parenting styles also attempts to identify patterns of child rearing that are consistently related to children's outcomes. The well-established distinction among parenting styles is a fourfold typology that involves different combinations of the two core dimensions of responsiveness and demandingness. Responsiveness entails parental warmth, acceptance, support, and sensitivity. Demandingness includes high standards, demands for maturity, and control. Authoritative parenting is characterized by high levels of responsiveness and demandingness, authoritarian parenting is high on demandingness but low on responsiveness, indulgent parenting is high on responsiveness but low on demandingness, and rejecting-neglecting parenting is neither responsive nor demanding (Baumrind, 1991, Maccoby & Martin, 1983). Authoritative parenting, in which the parents are warm and firm, is reported to be more successful than any of the nonauthoritative parenting styles, as evidenced by its consistent association with higher academic achievement, better mental health, and fewer problem behaviors for both children and adolescents.

## PARENT-CHILD RELATIONSHIPS IN CONJUNCTION WITH PEER GROUPS

The parent-child relationship needs to be considered against a broader social context that encompasses influences such as schools, teachers, media, and peer groups. Peers and parents may appear to represent two vastly different social worlds for a child. However, research has provided mounting evidence on the significant and complex interplay between the two worlds. Studies have reported that parents directly influence their children's friendship formation by selecting residential areas and schools, enrolling children in extracurricular programs, and serving as gatekeepers in the management of children's peer relationship by initiating, arranging, monitoring, and facilitating their children's contacts with potential friends (Parke, MacDonald, Burks, Carson, Bhavnagri, Barth, et al., 1989). Parents also have an influence on children's selection of friends through socialization, that is, by passing on their values in a way that facilitates their children's choice of friends who have similar values and orientations (Chen, Dornbusch, & Liu, 2007).

## PREDICTORS OF PARENTAL BEHAVIOR

Since the 1980s scholars increasingly have explored the antecedents of parental behavior. Specifically, researchers have investigated the extent to which a broad range of factors shape parental behavior; those factors include early upbringing, personality, mental health, child characteristics, marital satisfaction, social network support, economic hardship, and parenting beliefs (Belsky & Jaffee, 2006)

Many longitudinal and multigenerational studies have found that parents of young children tend to use the same parenting practices that their parents used in raising young children. The intergenerational transmission of parenting has been documented persuasively in studies of dysfunctional parenting, specifically, child abuse. These findings also shed light on the intergenerational transmission of parenting in the general population. Early exposure to harsh or abusive parenting is related to subsequent adoption of coercive parenting practices with one's own children, whereas early satisfying experiences in the parental household predict supportive parenting behavior. Scholars also have investigated specific mechanisms that might have mediated the transmission of parenting practices across generations. Through modeling or social learning processes, children may internalize parenting beliefs. An early harsh upbringing also may contribute to their development of psychopathology or antisocial traits, which can lead to the adoption of similar harsh parenting behavior toward their own children (Belsky & Jaffee, 2006).

The marital relationship between parents also is an important predictor of parental behavior. Family researchers generally view a family as a social system, with marital, parent-child, and sibling interdependent subsystems (Minuchin, 1974). The quality of the marital relationship is believed to be the leading factor affecting the quality of family life. The spillover hypothesis, which proposes that moods, emotions, and behaviors are transferred directly from the marital situation to the parent-child context, has received a great deal of empirical support. A satisfactory marriage is likely to enhance parents' supportive and constructive behavior, whereas a poor marital relationship tends to hinder parenting performance and hurt the parent-child relationship (Erel & Burman, 1995).

Socioeconomic status is one of the major structural factors that predict parenting practices. Economic difficulties have negative effects on parental sensitiveness and responsiveness because financial strains may add pressure and stress to a family's daily life. For example, higher rates of child abuse are reported among families with lower levels of education, in poverty, or with blue-collar occupations (Belsky & Jaffee, 2006).

## CULTURAL INFLUENCES

European and North American scholars have focused on the effects of reciprocity and mutuality on parent-child relationship, yet those processes may not be generalizable to all cultures. One of the guiding concepts in cross-cultural research for several decades has been individualism-collectivism. In individualistic societies such as the United States, Canada, and Western European countries, individual goals and freedom are honored. In collectivist societies such as Asian, African, and Latin American countries, group goals are predominant and seniority and authority are respected. In collectivist societies parents tend to have more absolute authority, demanding obedience from children and granting them little autonomy. Because this is the norm in such societies and because there are societywide assumptions that legitimize parental authority and power as fair, children may take it for granted, do not expect much autonomy, and grow up into responsible adults as expected by their society.

In individualistic societies, in contrast, individual rights are valued in all arenas, with a weaker social emphasis on parental authority and power. From a young age children are encouraged to develop independent and critical thinking and display their individuality. Parents in democratic societies will be more successful when they establish a cooperative relationship with their children so that the children will be more willing to accept parental guidance (Maccoby, 2003, Trommsdorff & Kornadt, 2003). Immigrant families that move from collectivist societies to the United States may face a special challenge when the parents continue to exercise their more absolute parental authority and control as their children are being immersed in an individualistic culture that leads them to expect a democratic relationship.

## WHERE IS RESEARCH GOING?

Although scholars have made progress in conceptualizing bidirectionality in studies of parent-child relationships, those theoretical advances have not been accompanied by commensurate advances in empirical research. Most empirical research has continued to be dominated by a persistent top-down emphasis on parental influence over children's outcomes. Research guided by the bidirectional framework is still expanding. The challenge scholars face is not a lack of evidence documenting the effect of the parent or that of the child; instead, studies need to investigate the complexity of those effects. Numerous contextual factors need to be explored further so that researchers can specify under what conditions an effect or combined effects are more likely to play out.

Whereas researchers who study parent-child relations may have overemphasized the unidirectional influence from parents to children, there is no reason to underestimate parental influence and deny the existence of a parent-child hierarchy. The important message is how parents should adapt to the situation in a way that is consistent with their parental responsibilities. In a completely egalitarian household without any parental authority or in a reversed hierarchy in which the child runs the house the outcome is usually detrimental. However, at the same time parents need to realize that the assertion of parental power will not be successful unless children's power is taken into consideration. This approach requires warm, sensitive, and responsive parenting practices to build a healthy parent-child relationship so that children will be willing and cooperative as the parents undertake their child-rearing tasks (Maccoby, 2003).

**SEE ALSO** Volume 1: *Attachment Theory; Child Abuse; Cultural Capital; Family and Household Structure, Childhood and Adolescence; Parental Involvement in Education; Parenting Style; Policy, Child Well-Being; Poverty, Childhood and Adolescence; Racial Inequality in Education; Social Capital; Socioeconomic Inequality in Education.*

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# PARENTAL INVOLVEMENT IN EDUCATION

Research in parental involvement in education is founded on the premise that families and communities—as well as schools—play a crucial role in children's social and academic development. Hypothesizing that children are more likely to succeed when their schools, families, and communities work together, parental involvement research has contributed to a broad-based effort in U.S. educational policy and practice to bridge gaps between home and school. Although important questions persist regarding the independent effects of parental involvement, research clearly indicates that affluent and highly educated parents are more involved than less advantaged parents and that this school involvement is an important mechanism underlying the reproduction of educational inequality. By encouraging all parents to take a more active role in their children's schooling, parental involvement efforts seek to level this source of educational inequality, improving the life chances of all youth.

## THEORIES OF PARENTAL INVOLVEMENT

Although sociologists of education and developmental psychologists have long been interested in the ways in which schools and families interact to influence children's educational experiences, this work has traditionally viewed the school and the home as separate, isolated spheres of activity. Parental involvement efforts, by contrast, blur the boundaries between family and school. Much of the work around parental involvement began in the 1980s when the sociologist Joyce L. Epstein (1987) developed a theory of parental involvement that conceptualized the school and the family as "overlapping spheres of influence" in children's lives.

Epstein's (1992) widely cited typology of parental involvement draws attention to five areas for collaboration between schools and families: (a) basic parental obligations such as providing a safe home environment

that is conducive to learning; (b) communication between school and home; (c) school meetings, volunteering, and other activities that bring parents into schools; (d) home learning and homework help; and (e) parental participation in school decision making.

Drawing on work in developmental psychology, Epstein argues that collaboration between families and schools increases the overlap between these two spheres of influence, hypothesizing that parental involvement helps families and schools more effectively advance shared goals related to children's development and educational attainment. This developmental theory leads Epstein to assume that increasing parental involvement can have positive consequences for all children, regardless of the social context in which it occurs. As a result, most of Epstein's work focuses on developing strategies to improve parental involvement.

Subsequent sociological work, however, draws this assumption into question by situating parental involvement as a mechanism through which class advantages are reproduced. The research of Lareau (2000, 2003) indicates that affluent and highly educated parents tend to take a more active role in their children's schooling than poor and working-class parents. Whereas highly educated parents are at ease in schools, can interact comfortably and effectively with teachers, and have the confidence to help their children with homework, less highly educated parents lack this ease and confidence and tend to view schools as having the exclusive role in their children's education. Furthermore, Lareau argues that the involvement of parents of high socioeconomic status (SES) may be more effective than the involvement of less advantaged parents, because highly educated parents have a better understanding of teachers' expectations and the unspoken rules at work in parent–school interactions. Lareau's work, which is grounded in sociological reproduction theory, suggests that raising the involvement of low-SES parents may do little to narrow class-based gaps in academic achievement.

## METHODS IN PARENTAL INVOLVEMENT RESEARCH

Parental involvement research draws widely from among the methods commonly used in social science and educational research, including structured teacher interviews, ethnography, and quantitative analysis of parent survey and student test data.

Much of Epstein's research in parental involvement revolves around teacher interviews and surveys, in which teachers are asked about their willingness to collaborate with parents, their efforts to stimulate parental involvement, the extent to which parents participate in their children's schooling, and the consequences of this participation. This research demonstrates that many teachers are very interested in raising parental involvement levels and provides rich data on the approaches that teachers and schools use to do so (c.f. Epstein & Becker, 1982; Epstein & Dauber, 1991). These teacher interviews, however, offer little direct insight into the experience of parents and students. Therefore, they are arguably less reliable sources for information about how parents approach their children's schooling and the efforts that parents make to help their children, particularly when these efforts take place outside of the school.

Most research in parental involvement conducted in the past 20 years has focused on data gathered directly from parents and students. In her ethnographic research, Lareau (2000) carefully tracked a small number of families, observing the practices of a diverse sample of parents and discussing these practices with parents, children, and, in select cases, school officials. These observations provide a nuanced description of the relationships between families and schools and considerable insight into *why* educationally and economically advantaged parents tend to be more highly involved in their children's schooling than less advantaged parents.

Although this nuance is lost in survey data analyses, quantitative research methods have become increasingly central to parental involvement research. Often based on random samples of the population of U.S. schoolchildren, these quantitative studies improve the generalizability of findings derived from the qualitative studies that Epstein, Lareau, and others have conducted. Furthermore, by linking parental descriptions of involvement activities to data describing family's racial, ethnic, and socioeconomic background, as well as standardized measures of students' academic achievement and socio-development, these quantitative studies make it possible to assess the causal effects of parental involvement.

## CLASS-BASED INEQUALITIES IN PARENTAL INVOLVEMENT

Survey data gathered by the U.S. Department of Education clearly indicates that the extent to which parents are involved in their children's education is closely related to their socioeconomic background (Vaden-Kiernan & McManus, 2005). Class-based inequalities are particularly pronounced in intensive forms of parental involvement, such as school volunteering. The 2003 National Household Education Survey indicates that 55% of parents with a B.A. volunteered in their children's school or served on a school committee. By comparison, just 30% of parents whose formal education ended with a high school diploma and just 16% of parents who dropped out of high school were similarly involved in their children's schools. In a similar manner, parents in

poverty households are approximately half as likely to report volunteering in their children's schools relative to parents in non-poverty households (27–45%). Language barriers also discourage parental involvement. Children from households in which no parent speaks English are less than half as likely to have a parent who volunteers at school.

Although class-based inequalities are less pronounced in other areas of parental involvement, they remain substantial. Most parents attend general school meetings and parent–teacher conferences, regardless of their educational attainment or poverty status. For example, 93% of parents with college degrees report attending a school meeting in the 2002–2003 school year, compared to 84% of parents whose formal educated ended with a high school diploma. The gap separating the school meeting and parent–teacher conference attendance rates for parents above and below the poverty level is similar in magnitude.

Despite these class-based inequalities, racial and ethnic inequalities are relatively muted. In 2003, for example, African American parents were slightly more likely to attend parent–teacher conferences and school events than White parents. Furthermore, Lareau's (2003) ethnographic research as well as multivariate analyses based on survey data suggest that among parents with similar levels of educational attainment and family income, racial and ethnic gaps in parental involvement are small (Fan, 2001; Muller & Kerbow, 1993).

## PARENTAL INVOLVEMENT IN EDUCATIONAL POLICY

The effort to eliminate these class-based inequalities in parental involvement has been central to federal efforts to improve the education of poor and minority youth since 1965, when the Elementary and Secondary Education Act set aside funds for parental involvement efforts in high-poverty schools. The Clinton administration's 1994 Goals 2000: Educate America Act made universal parental involvement a central federal goal. The 1994 Clinton administration reauthorization of the Elementary and Secondary Education Act added a new provision requiring the nation's poorest schools to spend at least 1% of their Title I supplementary federal funds to develop educational "compacts" between families and schools.

These federal efforts, as well as state- and district-level parental involvement efforts, have particularly focused on providing opportunities for parents to visit their children's schools and meet with teachers and administrators (Domina, 2005). A 1995–1996 survey by the National Center for Education Statistics showed that nearly all public elementary and middle schools in the United States sponsored activities that were designed to foster parental involvement. According to the survey, 97% of schools invited parents to attend an open house or back-to-school night, 96% hosted arts events, 92% scheduled parent–teacher conferences, 85% sponsored athletic events, and 84% had science fairs (Carey, Lewis, Farris, & Burns, 1998).

The No Child Left Behind Act of 2001 took the parental involvement effort further. The law defined parental involvement as "the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities." It requires schools to regularly distribute information about teacher qualifications and student test scores to parents. In addition, the law sets aside federal funds to encourage parents in high-poverty schools to help their children with homework, attend scheduled parent–teacher conferences and other events at school, and volunteer in the classroom. In addition, the law instructs schools to give parents advisory roles in school governance decisions. Many schools have used these funds to hire full-time parental involvement coordinators, who are responsible for maintaining communications with parents and organizing school events.

## TRENDS IN PARENTAL INVOLVEMENT

These policy efforts seem to have helped boost parental involvement levels at U.S. schools, and a growing proportion of parents report participation in school-sponsored involvement activities. In 1999, 78% of the nationally representative sample of parents with school-age children surveyed in the National Household Education Survey reported that they attended a general meeting at their child's school in the past year (Nord & West, 2001). By 2003, when the survey was replicated with a new sample of U.S. parents, that figure had risen to 88% (Vaden-Kiernan & McManus, 2005). Furthermore, the 1999 and 2003 National Household Education Surveys point to smaller, but still statistically significant, improvements in other areas of parental involvement. Between 1999 and 2003, the portion of parents who had attended a parent–teacher conference increased from 73% to 77%; the portion of parents who had attended a school athletic event or performance increased from 65% to 70%; and the portion of parents who had volunteered at school or served on a school committee increased from 37% to 42%.

The 2003 National Household Education Survey also indicated that 85% of parents had helped their children with their homework in the previous year. The 1999 survey, however, did not collect data on homework help, so it is impossible to identify trends in this common form of parental involvement.

## THE CONSEQUENCES OF PARENTAL INVOLVEMENT

Given the popularity of parental involvement initiatives as a tool for school reform, it is surprising to note that research on the link between involvement and school success has been inconclusive. In the past decades, dozens of studies have attempted to isolate the consequences of parental involvement. Many of these studies use multivariate analysis techniques to isolate the consequences of parental involvement from the potentially confounding effects of family background, in effect asking whether the children of highly involved parents do better in school than children from families with similar SES whose parents are less involved.

Whereas some studies indicate that the children of highly involved parents tend to do better in school than their peers with less involved parents, others report that parental involvement in education is negatively related to children's educational outcomes. Even within studies the results are often uneven, with the observed effects of parental involvement depending on which aspects of involvement and which educational outcomes are being considered (Fan & Chen, 2001).

Evaluations of programs that attempt to improve student educational outcomes by stimulating parental involvement yield similarly mixed results. In 2002 Mattingly and colleagues reviewed the evaluations of 41 school- and district-level parental involvement programs and found little empirical evidence to support the claim that schools' efforts to improve parental involvement ultimately improve students' outcomes. Only half of the parental involvement programs that provided adequate data to reach conclusions about program effectiveness actually improved student outcomes.

These mixed results are difficult to interpret. Epstein's developmental theory of parental involvement predicts that involvement should substantially improve children's odds of school success. Furthermore, although Lareau's reproduction theory suggests that the positive consequences of parental involvement are closely linked to other advantages that highly involved parents offer their children, even this more skeptical theory suggests that involvement's effects should be generally positive. Why, then, do parental involvement researchers so frequently fail to find positive results? One possible explanation is that the relationship between parental involvement and children's educational outcomes is complex. Parents often intervene in their children's education only when their children are experiencing difficulties in school; conversely, they often relax their involvement when children are succeeding in school. If this is the case, many estimates of the consequences of parental involvement are likely biased, because they confuse the effects that parental involvement has on children's educational success with the cross-cutting effects that children's educational success has on parental involvement.

A handful of studies have attempted to address these causal complexities by studying the consequences that parental involvement activities have on children's test scores over time. These studies draw on cohort-based longitudinal studies, which follow the same students as they progress through school, to produce unbiased estimates of the consequences that parental involvement has on children's schooling. Muller (1998) and Fan (2001) examined parental involvement activities that occurred when students were in eighth grade, measuring the consequences on student math and reading achievement score gains between the eighth and twelfth grade. Although neither study found unequivocal evidence for the effectiveness of parental involvement, Muller found that children who discuss school with their parents experience relatively rapid gains in math achievement. Similarly, Fan found that children who work on homework with their parents show large gains on standardized tests of reading, math, science, and social studies skills.

Hypothesizing that parental involvement may have greater consequences for younger students and for student's social and behavioral outcomes, Domina (2005) built on these findings, studying a cohort of elementary school children and their mothers. Although this study indicates that involvement has no measurable impact on student improvement on academic achievement exams, it did find that parental involvement could have strong causal effects on a student's behavior. Domina found that parents protect their children from behavioral problems when they volunteer at schools and check on their homework.

## FUTURE OF PARENTAL INVOLVEMENT RESEARCH AND POLICY

After more than 40 years of government activity dedicated to using parental involvement as a tool for narrowing persistent educational inequalities, and more than 20 years worth of social science research about the involvement of parents in children's educations, a striking gap between the state of parental involvement research and practice has emerged. It is clear that parental involvement practices are becoming increasingly common in American schools. It is less clear, however, that these involvement activities are improving children's chances of success in school. In the near future, researchers, policymakers, and practitioners should work together to bridge this gap, by investigating and implementing efforts to improve the efficacy of parental involvement activities, particularly for disadvantaged parents.

**SEE ALSO** Volume 1: *Cultural Capital; Data Sources, Childhood and Adolescence; Intergenerational Closure; Parent-Child Relationships, Childhood and Adolescence; Policy, Education; Racial Inequality in Education; Social Capital; Socioeconomic Inequality in Education.*

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***Thurston Domina***

# PARENTING STYLE

Parenting styles and parenting practices are often considered synonymous, but each term describes a distinct aspect of the parenting role. *Parenting practices* refer to specific parenting behaviors such as parental involvement, monitoring, or spanking. *Parenting styles*, by contrast, refer to a set of childrearing attitudes or orientations, which are partially expressed through parenting practices (Darling and Steinberg, 1993). For several decades scholars have sought to identify parenting styles that each individual parent displays. These styles have been found to consistently relate to various outcomes of children and adolescents. Scholars also have studied connections between parenting styles and children's outcomes cross-culturally. Most research concurs that one particular parenting style, *authoritative* parenting, is consistently associated with positive child outcomes such as higher levels of academic performance, social competency, self-confidence, mental health, and responsible behaviors. Authoritative parenting is characterized by parental warmth, acceptance, having high standards for one's children, age-appropriate maturity demands, and two-way communication. These positive outcomes are believed to benefit children and adolescents throughout their life course.

## A BRIEF HISTORY OF RESEARCH ON PARENTING STYLES

A number of research programs pertinent to parenting style were established in the 1930s and early 1940s by several prominent European intellectuals who came to the United States as refugees during World War II (1939–1945) (Maccoby, 2007). Kurt Lewin (1890–1947), a European field theorist who believed in the contextual influences of social behavior, worked with American colleagues on group atmospheres. They studied club groups made up of boys ages 10 to 11 who were participating in recreational activities. By placing adult leaders who displayed three different leadership styles into the groups, Lewin and his collegues created three kinds of group atmospheres: authoritarian, democratic, and laissez-faire. An authoritarian leader would decide on the group activities, assign roles and partners to the boys, give praise and criticism without explaining the policy, and remain emotionally distant. A democratic leader

would let the group members discuss and decide on the activities, roles, and partners themselves, yet would also provide guidance, suggest alternative options, give feedback, and provide explanations. A laissez-faire group leader would be friendly but withdraw to the sideline and let the boys run everything, providing information if asked but not giving any guidance, advice, suggestion, or feedback. Compared to the authoritarian and laissez-faire groups, the boys in the democratic group were observed as more engaged with the activities, more successful in getting the job done, and continuing the work without supervision (Lewin, Lippitt, & White, 1939).

Lewin's work on group atmospheres greatly influenced Alfred Baldwin (b. 1914), a graduate student at Harvard in the 1930s, who later applied Lewin's paradigm to family settings—since a family can be considered a small group, and thus the style of a parent may affect how children function. Baldwin identified several different parenting styles. He found that "warm democracy," which resembled Lewin's democratic leadership and was characterized by parental affection and empathy, was associated with the most successful child outcomes, including the development of intellectual competence and low levels of anxiety in children (Baldwin, 1955). Another European scholar, Else Frenkel-Brunswik (1908–1958), with her psychoanalytical approach, worked with American colleagues and identified a harsh and threatening parental upbringing as a critical influence on the development of a personality that was prejudiced and intolerant (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950).

While these early studies documented the benefits of parental warmth and leniency as well as the detrimental effect of controlling and harshness, developmental psychologist Diana Baumrind (b. 1927) strongly believed that a successful parenting style required both warmth and firm control. Based on these two critical components of warmth and control, Baumrind proposed a three-category typology of parenting style: authoritarian, authoritative, and permissive. The authoritative parenting style was believed to be the most optimal one, which encompassed a high level of warmth, and a high level of firmness; the latter criterion was not an aspect of Baldwin's "warm democratic" parenting (Maccoby, 2007). By contrast, the authoritarian style was distinguished by high levels of firmness and low levels of warmth, and the permissive parent typically showed low levels of firmness.

By the early 1980s Baumrind's typology was solidly established in the field of child development. However, some critics suggested Baumrind's typology was incomplete, in that the three parenting styles were limited to relatively well-functioning families. Because earlier research on parenting had revealed two core clusters or dimensions (Becker, 1964), responsiveness and demandingness, Eleanor Maccoby and John Martin (1983) broadened the scope of Baumrind's threefold typology into four by differentiating the permissive parenting into two distinctive styles: indulgent parenting and indifferent or uninvolved parenting. This fourfold scheme better captures all parenting styles including those in maladapted families, so it is more generalizable to a larger population than was the original three-category scheme (Darling & Steinberg, 1993).

## A CLOSER LOOK AT THE FOURFOLD PARENTING STYLE TYPOLOGY

The well-established fourfold typology of parenting styles is characterized by high or low levels of two core dimensions: (a) responsiveness, which refers to warmth, acceptance, support, and sensitivity; and (b) demandingness, which entails consistent discipline, age-appropriate maturity demands, and control. As noted earlier, *authoritative* parenting is characterized by high levels of responsiveness and demandingness. Authoritative parents guide children's activities in a rational manner. They set high standards and will apply firm control in situations where parental guidance is needed. They also recognize children's individual rights, explain the reasoning behind their policies and disciplinary practices, and encourage verbal give-and-take communication. Their disciplinary actions are supportive rather than punitive. Authoritarian parents recognize that they are not invincible and flawless, yet they also do not base their decision-making on their child's desires only. They aim to raise children who are assertive, self-regulated, responsible, cooperative, and considerate.

*Authoritarian* parenting, by contrast, is high on demandingness but low on responsiveness. Authoritarian parents demand high levels of compliance, discourage verbal give-and-take, and use disciplinary measures that are forceful and punitive. They emphasize obedience, work, respect for authority, and the importance of maintaining order and traditional structures. *Indulgent* parenting is high on responsiveness but low on demandingness. Indulgent parents do not set high standards nor demand conformity from their children. They tolerate their children's impulse to a greater extent and do not require mature and responsible behavior. They offer themselves as a resource to be used, with disciplinary actions that are relaxed and lenient. They grant their children extensive autonomy and tend to avoid asserting control to stay away from confrontations. *Rejective or neglectful* parenting is neither demanding nor responsive. Rejective or neglectful parents do not set standards and structures for their children to follow and do not monitor their

children. They are not supportive and often reject their children. Frequently disengaged and withdrawn, they neglect their own responsibilities as parents as well as the development of their children.

Nancy Darling and Laurence Steinberg (1993) propose that parenting style should be regarded as a relationship's emotional climate, which moderates (that is, either amplifies or reduces) the effect of specific parenting practices such as monitoring and involvement. They argue that parenting styles create a context that can be partially expressed through specific parenting practices that convey parental attitudes toward the child. Thus parenting styles will first affect children's willingness to be socialized, and thus they affect how effective a particular parenting practice is.

For example, the ways that a specific parental practice, such as involvement in children's school performance, affects children's behavior may vary based on whether the parent uses an authoritarian, authoritative, or permissive style. An authoritative parent might mold their child's school performance by using explanations, respecting children's perspectives, encouraging discussions, and two-way communication. Consequently parental involvement under such a climate may make children more receptive to parental guidance and, ultimately, make parental involvement more effective. Conversely, an authoritarian parent may make parental involvement an imposed practice, which is likely to lead to children's resistance and thus make their involvement noneffective. Similarly, monitoring conducted with a warm and responsive style is likely to convey parental caring and concern and thus make adolescents more likely to cooperate. Supervision with a cold and unsympathetic manner may arouse adolescents' resentment, which may lead them to look for ways to get away from supervision.

## IMPLICATIONS OF PARENTING STYLE FOR CHILD AND ADOLESCENT DEVELOPMENT

Many studies have examined Baumrind's typology among children aged between 3 and 12 and reported that children from authoritative families are more confident, assertive, competent, considerate, cooperative, and mature (Maccoby & Martin, 1983). Parenting style research has been extended to the period of adolescence, with the consistent finding that authoritative parenting is the most successful parenting style, whereas rejective or neglectful parenting is the least effective. Authoritative parenting is consistently related to adolescents' superior academic achievement, higher confidence and self-reliance, lower psychological distress, and less misconduct. Even a study based on a sample of economically disadvantaged, ethnic minority juvenile offenders revealed the beneficial effects of authoritative parenting (Steinberg, Blatt-Eisengart, & Cauffman, 2006). Adolescents with rejective or neglectful parents tend to struggle academically, have lower confidence, are more vulnerable to distress, and are more likely to get into trouble (Lamborn, Mounts, Steinberg, & Dornbusch, 1991).

Authoritarian parenting and indulgent parenting have received less consistent results regarding their associations with various outcomes. Adolescents with authoritarian parents have lower levels of drug use or problem behaviors. However, they are likely to report lower self-confidence. Adolescents from indulgent families tend to score high in social competence and self-reliance, but do less well in school, and are more likely to get involved in drugs, alcohol, and problem behaviors (Lamborn et al., 1991). These patterns reflect the importance of both parental warmth and acceptance on the one hand, and parental authority and control on the other. Without parental warmth and acceptance, it is difficult for children to develop self-confidence. Without firm parental control, children are less likely to obey authority under necessary circumstances and are more likely to drift into activities valued by peers rather than adults.

One question many people ask is, "What will happen if two parents display different parenting styles?" Traditionally, childrearing tasks are performed by mothers more than fathers. Most parenting research throughout history is based on the assumption that mothers matter more than fathers for childrearing. Many researchers focused exclusively on mothers' parenting styles only, assuming that fathers concur with mothers in this arena. Other researchers did not share this assumption and collected data on both parents' styles, but they took the average of both mothers' and fathers' scores in the analysis or left out from the analysis those families where parents displayed dissimilar parenting styles. To remedy this limitation in prior studies, several researchers have analyzed parenting style scores for mothers and fathers separately and examined interparental inconsistencies in parenting styles. As expected, having two authoritative parents is associated with the best child outcomes. Having one authoritative parent and one nonauthoritative parent is better for children's development than having two nonauthoritative parents. These findings suggest that having one authoritative parent is a resource that may help to buffer against the potentially negative effects of having a nonauthoritative parent. Consistency between two parents is beneficial for children only if both parents are authoritative (Fletcher, Steinberg, & Sellers, 1999).

While authoritativeness, characterized by the two dimensions of responsiveness and demandingness, is predictive of many positive outcomes for children and

adolescents, some scholars consider the dimension of demandingness, which includes levels of control, deserves further analysis, especially for adolescents. Brian Barber and his colleagues (1994) propose that the concept of parental control should be disaggregated into two types of control: behavioral control and psychological control. Analyses show that the former is related to fewer externalizing problems such as using drugs or alcohol, whereas the latter is associated with more internalizing problems such as loneliness or depressive symptoms in children.

A study by Marjory Gray and Steinberg (1999) has "unpacked" authoritativeness into three components that represent responsiveness, behavioral control, and psychological control. Behavioral control involves strictness such as child monitoring and limit setting, whereas psychological control entails the extent of psychological autonomy granting and encouragement of adolescent individuality in the family. As expected, the component of responsiveness is consistently related to positive outcomes such as higher academic achievement, healthier identity development, and lower rates of psychological distress and misconduct. The two types of control, behavioral and psychological, have predicted different outcomes. A high level of behavioral control is associated with fewer behavioral problems, whereas a high level of psychological control (and thus a lower level of autonomy granting) is associated with poor emotional health. A combination of high responsiveness with high behavioral control and low psychological control from parents is associated with the best psychosocial development.

## CROSS-CULTURAL EXPLORATIONS OF PARENTING STYLES

Although the benefits of authoritative parenting are clear-cut among non-Hispanic White students, researchers have reported inconsistent patterns in samples of Asian, African-American, and Hispanic-American students (Dornbusch, Ritter, Liederman, Roberts & Fraleigh, 1987). Ruth Chao (1994) argues that the Baumrind typology of parenting styles is entirely based on Euro-American cultural ideals that highly value individual freedom. Baumrind's conceptualization of authoritativeness entails encouragement for children's independence and self-expression. These values do not have the same relevance in Asian societies, which have a traditional heritage of Confucianism that emphasizes hierarchies in social structure and children's obligations to respect and obey parents. Strict control and a lack of two-way communication, which are considered potentially harmful to children in Western cultures, may be perceived very differently in Asian cultures, where successful parenting corresponds to high levels of parental control and government involvement in children's lives and high expectations for children's success.

However, some cross-national studies on parenting styles have reported authoritative parenting as the most optimal and authoritarian parenting as being harmful, similar to what has been observed in the U.S. individualistic society (Sorkhabi, 2005). The results from cross-cultural studies are still inconclusive. More studies are needed before generalizing the parenting style findings to all cultures.

## CONCEPTUAL AND METHODOLOGICAL CHALLENGES

Standard measures of parenting style are based on the assumption that styles are stable, rather than dynamic, over the life course of both the parent and child(ren). Typologies of parenting style suggest that each individual parent may recurrently display a certain type of parenting style, and that parenting style is relatively stable over time. Some researchers question this assumption of stability. Joan Grusec and Jacqueline Goodnow (1994) propose that parents may not necessarily use one consistent style across time and context, or for all of their children. Rather, parenting styles may differ depending on the child's age, emotional state at the moment, the nature of the misbehavior, and the social context. For example, responsiveness rather than demandingness is more appropriate if a child is upset. Reasoning is used if a child is not considerate of others or does not follow social conventions. Parental power assertion is necessary if a child is defiant to the legitimate parental authority.

## FUTURE DIRECTIONS

While parenting research has achieved a great deal in identifying parenting styles and their associated outcomes, many scholars argue that the top-down approach of focusing on parental influence on children is incomplete, and that scholars should also explore horizontal processes that involve mutual influences between parents and children (Kuczynski, 2003). Parents who have raised more than one child must have noticed how children in the same family differ in their temperament, personality, and ability, and how the same parenting strategies may not have the same effect on different siblings within the family. A bidirectional approach to studying parent-child relationship suggests that children are capable of initiating intentional behaviors, reflecting over interactions, interpreting situations, resisting requests and influence, and blocking parental goals.

Certainly, both parental responsiveness and demandingness are powerful influences on child outcomes. However, a parent's behavior is shaped by (and in turn shapes) the child's behavior. While the effect of parents as a critical socialization force is still considered highly important, scholars call for increased attention to children as an

important instrumental force that influences parenting. More studies are needed to sort out how parents adjust their parenting styles toward different children, at different developmental stages, and in different social and emotional situations. Moderating effects on parenting styles also need to be further explored; scholars are interested in exploring whether the consequences of parenting style vary based on factors such as the family's socioeconomic status, family structure (e.g., two-parent households versus single-parent households and stepfamilies), and ethnic or cultural influences.

The utility and benefits of authoritative parenting has been consistently demonstrated over the decades. Parents need to be warm and firm, and adjust their parenting to the developmental changes of their children. As to the question of what is the best parenting style, evidence persuasively demonstrates the advantages of authoritative parenting style over any nonauthoritative style. More important future endeavor should be devoted to the practical application of parenting styles. Parenting classes should be offered to parents, foster parents, and primary caregivers of children of all ages to pass along the basic information on parenting styles, so as to educate adults on how to be authoritative in order to facilitate the healthy growth of children.

**SEE ALSO** Volume 1: *Attachment Theory; Child Abuse; Parental Involvement in Education; Parent-Child Relationships, Childhood and Adolescence.*

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*Zeng-yin Chen*

# PEER GROUPS AND CROWDS

One of the most striking features of children's social development is the evolving character of peer groups.

Elementary school-age children develop small "interaction-based" peer groups or "cliques." In adolescence, however, larger peer groups or "crowds" emerge. Leading peer group researcher B. Bradford Brown has defined crowds as relatively large "reputation-based" collectives of individuals who share a common image but who do not necessarily spend much time together. An adolescent's crowd affiliation provides a social identity and indicates the activities and attitudes with which he or she is associated in the perceptions of peers. Examples of crowds common among American secondary school students are nerds, brains, druggies, and populars.

Though differences in the character of prototypic identities exist across schools, peer crowd membership is typically associated with a number of important behaviors and beliefs, such as substance use and achievement orientations (Kindermann, 2007; La Greca, Prinstein, & Fetter, 2001; Sussman, Pokhrel, Ashmore, & Brown, 2007) as well as peer relations (Eder, 1985). Longitudinal research (Barber, Eccles, & Stone, 2001) indicates that one's high school social identity category even predicts psychological adjustment and educational outcomes through young adulthood.

## PEER GROUPS/CROWDS AND DEVELOPMENT

Peer groups become more prominent as a cultural and interpersonal force during adolescence because of changes within individuals and in the social environment. Cognitive developmental shifts associated with adolescence, which have been implicated in the changing character of "person perceptions" and other components of social information processing, probably have a bearing on the emergence of crowds and changes in crowd conceptions across adolescence. Developmental gains in abstract reasoning capacities and hypothetical thinking are especially relevant for understanding adolescent social cognition, but it is important to realize that some negative results can accrue from the same structural changes that allow for more advanced forms of thought. Youth may be more enthusiastic than accurate in hypothesizing about crowds. They may engage in overgeneralization and flagrant exaggeration, especially in early adolescence.

The social environment of the secondary school is more complicated and challenging than that of the primary school. Students are typically faced with a much larger school environment populated by a bewildering number of strangers. Brown, Mory, and Kinney (1994) have suggested that social cognitive theory and research on adult social identity could offer insight into how crowds might serve individuals in coping with these challenges. Social psychologists assert that social categories serve as perceptual organizers and also help individuals anticipate interactions with others based on previous category knowledge. Social risk can be avoided if individuals can anticipate friendly or unfriendly reception by others. Unfortunately, however, social categorization typically involves stereotyping and in-group favoritism, characterized by a perceptual exaggeration of similarities within categories and differences between categories.

## CROWDS AS CARICATURES, CHANNELS, AND CONTEXTS

Brown et al. (1994) suggested that crowds serve as *caricatures*, *channels*, and *contexts* for adolescents. They provide identity caricatures, or prototypic identities recognized by peers, through which adolescents may themselves be known (Stone & Brown, 1999). This knowing may be superficial, but it seems that adolescents prefer to be understood partially to being invisible or mistaken for someone with values the individual rejects. Moreover, theorists (Newman & Newman, 1976) have speculated that adolescents may prefer a "safe" group identity to the commitment of a deeper personal identity in early adolescence as they cope with uncertainties engendered by multiple social and physical changes, such as the demands of dating and romance.

As channels, crowds regulate relationships by serving as perceptual anchorages in one's mental map of the social system, helping adolescents recognize potential friend or foe by signaling who is likely to share values and who is likely to rebuff a friendly text message. It is clear why adolescents may sense the need for an efficient cognitive map (Brown et al., 1994) to guide their movement through their social world.

Finally, crowds serve as contexts for relationships and identity development. Many crowds are identified with leisure activity contexts such as student council, sports, or even risk-taking pursuits. Research centering on extracurricular activities (Barber, Stone, Hunt, & Eccles, 2005; Fine, 1987) suggests that social identities are part of a larger contextual system—including personality and personal identity, activity choices, the peer context existing in each activity, and the cultures of particular activities. Although this dynamic system applies most explicitly to those identities associated with organized community and school activities, one can easily extrapolate to those identities that are not centered on institutionally organized activities. Thus, crowd niches (perhaps even categories based on exclusion from such prominent and accepted niches, such as "nobodies" or "outsiders") can form adolescent cultures in which leisure activities, values, and styles are consensually validated (Youniss & Smollar, 1985).

## CROWD MAPPING

Researchers as well as youth have often depicted crowds as mapped in terms of their relationships to each other or to some dimension—for instance, a status hierarchy. Brown

and colleagues (Brown et al., 1994; Stone & Brown, 1998) suggested a two-dimensional arrangement of crowds in conceptual social space, based on theoretical notions of formal and informal reward structures in high schools developed by sociologists Rigsby and McDill (1975). The formal dimension was seen to represent school engagement or adherence to the adult reward structure, while the informal dimension was seen to represent peer status. Some of their empirical work has employed multidimensional scaling, a statistical technique in which data regarding respondents' perceptions of the difference or similarity between crowds is analyzed and yields a display of the crowds as points on a map (Brown et al., 1994; Stone & Brown, 1998). In the maps yielded by these analyses, crowds were distributed across the map's quadrants in several "crowd clusters." Jocks and populars were perceived as similar, as were rebels and Blacks. Normals and brains were also perceived as similar, but the wannabe Blacks were remote from all other crowds.

In a 2008 study by Stone, Barber, and Eccles, discriminant function analysis of the reported characteristics of youth who would in coming years identify with particular social identities yielded mappings similar to those derived through multidimensional scaling. In discriminant function analysis, data about group differences on the set of variables hypothesized as predictors are analyzed to indicate which groups differ most and which predictors best explain differences. In these analyses, the most prominent dimensions of difference between social identity groups seem to have represented a blurring of the formal and informal domains of the reward structure. Figure 1 provides an example of such a crowd map derived through discriminant function analysis.

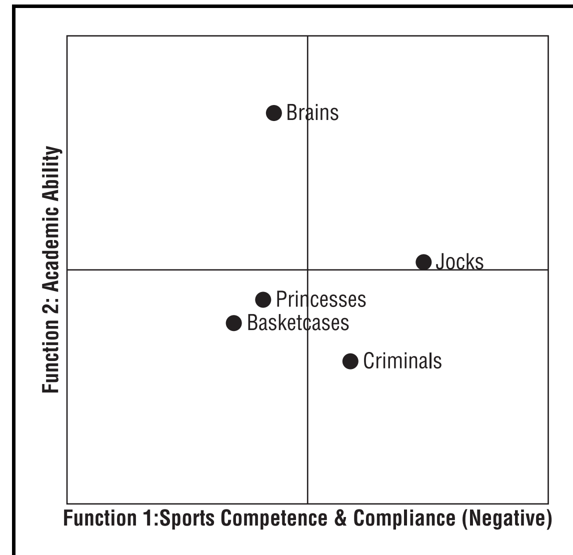


***Figure 1.*** *Plot of mean discriminant scores for future members of each peer group for the first (X–Axis) and second (Y–Axis) functions for 616 participants in the Michigan Study of Life Transitions.* CENGAGE LEARNING, GALE.

## DETERMINANTS OF PEER GROUPS/ CROWDS

The effect of the wider social structure on the adolescent peer group structure has been a frequent theme of research on peer groups (Eckert, 1989). In such accounts, crowd identities are seen to reflect the socioeconomic or ethnic composition of the community, with students being assigned to their crowd on the basis of parental position. Future adult socioeconomic class identities are then seen to be determined through dynamic processes of alignment and polarization operating in the high school social system.

Quantitative research has documented only a modest correlation between parental social class and crowd affiliation. Most theorists and researchers acknowledge, however, that socioeconomic class affects peer relationships at least indirectly through residential patterns, neighborhood schools, and youth activity participation, and that the significance of crowd-based social identities does in part lie in their delineation of varying adolescent orientations toward the values of normative adult society (Brown et al., 1994; McLellan & Youniss, 1999). For the most part, however, current research locates the meaning of peer group processes primarily in the social world of adolescents themselves.

## THE CHOICE OF A PARTICULAR CROWD NICHE

Social scientists have pondered the question of what future "jocks" or "burnouts" are doing in the years preceding high school. The separation of research traditions regarding children and adolescents delayed quantitative efforts to determine what characteristics of preadolescent children are predictive for the social identities they will develop during adolescence. However, ethnographic studies of preadolescent social development provided relevant evidence (Adler & Adler, 1998; Fine, 1987), especially regarding popular identities, describing such factors as personality, interests, activities, expressive characteristics specifically located in the peer culture, and differences between factors associated with male and female social identities.

Stone and Brown (1998) invited adolescents themselves to describe the differences between crowds. They reported that though there is some contention about the characteristics of crowds, based on the crowd affiliation of the perceiver, six domains were commonly used to describe crowds: dress and grooming styles, sociability or

antagonism toward outsiders, academic attitude, the crowd's hangout at school, typical weekend activities, and participation in extracurricular activities.

Findings from one longitudinal study mentioned previously (Stone et al., 2008) suggest that differences between individuals associated with particular high school social identity categories predate adolescence. Discriminant function analysis assessed the predictive relevance of nine characteristics measured in sixth grade for differentiating among social identities claimed 4 years later by more than 600 participants in the Michigan Study of Life Transitions. For females, academic motivation and sports competence accounted for more than 80% of the variability between groups. For males, academic ability, self-concept of appearance, and sports competence together accounted for more than 80% of between-group variability. Over half of the students could be correctly classified into their future crowd based on earlier characteristics.

## COMPETITION IN THE SEARCH FOR A CONGENIAL PEER GROUP IDENTITY

According to Newman and Newman's (1976) account, the adolescent who does not find a peer group niche feels alienated from peers. Nevertheless, mixed findings regarding the self-esteem benefits of crowd membership have suggested that it may not be crowd membership in itself that gives a sense of having a congenial place in the world. Brown and Lohr (1987) found that high-status crowds were valuable in that regard, but others were not.

Crowds are typically arranged in a status hierarchy, and young people may prefer to identify with crowds toward the top of the hierarchy (Eder, 1985). Thus, in addition to its role in identity formation, crowd identification can be an exercise in impression management. Though adolescents may attempt to convince their peers that they belong to a particular crowd, peers may either accept or reject this effort at impression management (Brown & Lohr, 1987; Eder, 1985; Merten, 1997). Indeed, teenage social systems often include crowds called the "wannabes," populated by individuals who strive unsuccessfully to be accepted into one crowd or another; their efforts at impression management are acknowledged by peers but not accepted. One area of related peer research explores aspects of aggression in the search for a positive peer group niche (see Cillessen & Rose, 2005, for a review of this literature).

## MEASURING PEER GROUP MEMBERSHIP

This conflictual dynamic renders identity negotiation problematic for many youth. It has also engendered controversy about how best to measure peer group membership (Sussman et al., 2007; Urberg, Degirmencioglu, Tolson, & Halliday-Scher, 2000). In keeping with the reputational basis of crowds and to avoid social desirability bias, Brown (Brown et al., 1994) prefers to ask selected knowledgeable youth to identify the crowds that exist in their schools and to assign their peers to one of the crowds thus identified. This "social type rating" method as well as "sociocognitive mapping" (Kindermann, 2007) have provided interesting methodological alternatives but are somewhat difficult to enact in school settings. Other researchers have asked youth to indicate the crowd with which they most identify (Barber et al., 2001; Stone et al., 2008). Despite findings of considerable correlation between self-reported and peer-reported crowd membership (Urberg et al., 2000), it is generally acknowledged that both methods are subject to bias and that multiple measures are beneficial.

Research has documented fluidity in crowd orientation. Strouse (1999) found, in her analysis of a large longitudinal data set, that more than half of participants changed their self-perceived crowd affiliation over a 2-year period. Kinney's ethnographic research (1999) revealed that new crowd cultures may be forged when individuals decide that they no longer are comfortable with a former social identity category and make behavioral changes to signal new interests and values to their peers. The salience of crowd affiliation and of conformity pressures within peer groups has also been shown to decline in later adolescence.

## FUTURE DIRECTIONS

Certainly the meaning and function of adolescent peer groups have not been fully explained. Differences in peer group functioning for youth beyond North America and for males and females are two areas much in need of further development. Another important issue for future research to explore is multiple peer group membership. Though researchers acknowledge that students may consider themselves to have multiple memberships, it has been difficult to accommodate this notion in research.

Adults (and adolescents themselves) might be reluctant to emphasize the category labels with which peers are organized in perception, but they are as powerful as adult labels such as "old people" and "academic types" in constraining identities and relations. A realistic understanding of adolescent peer groups could offer adults opportunities to help students examine and question stereotypes and anxieties that impede the formation of friendships across the borders of diverse groups. It will be important for those who promote positive youth development to understand more about how institutional practices such as ability grouping and extracurricular

activity promotion or neglect might impede the enhancement of development in peer group contexts. Given the importance of peers in the lives of adolescence, understanding peer groups is clearly essential.

SEE ALSO Volume 1: *Dating and Romantic Relationships, Childhood and Adolescence; Friendship, Childhood and Adolescence; Interpretive Theory; School Culture; Social Capital; Social Development; Youth Culture.*

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***Margaret R. Stone***

## PEER VICTIMIZATION

SEE Volume 1: *Bullying and Peer Victimization.*

## PERSON-ORIENTED APPROACHES

At the core of the person-oriented approach is a focus on the person as an organized totality. The person "as a whole" is regarded as the main conceptual unit and is often also the main analytical unit in the statistical analyses. At a theoretical level this implies that key components involved in the theoretical formulation of the system under study are regarded as operating together and influencing each other so that the main expression of the system is in how these components all together emerge and develop. They are then regarded as indivisible, and the configuration

of them within an individual is fundamental and cannot be understood by treating the components as isolated entities.

In methodological realizations of the person-oriented approach, the individual's patterns of values in the variables measuring the components are treated as the main analytical units, and typical patterns at a given time point and across the development of the individuals are observed. To give a simple example: In a Swedish study of boys' adjustment, six components were identified as together depicting their adjustment status. The whole six-variable pattern of values for a child was regarded as indivisible and was searched for distinct typical patterns using cluster analysis. Seven clusters (= typical patterns) were found, each with its distinct profile, and each boy belonged to one of these typical patterns. The person-oriented approach can be compared to the standard variable-oriented approach, whereby the variable is regarded as the main conceptual and analytical unit. This approach is far more common but is not addressed in this entry.

The person-oriented approach need not be anchored in the mainstream quantitative research tradition and can instead be carried out by case-oriented research and by using a qualitative approach. However, most commonly the modern person-oriented approach is a quantitative approach, studying a sample of persons and directed at explaining interindividual differences in emerging individual patterns of components. This formulation of the person-oriented approach is the focus of this entry. A related tradition, called p-technique, was introduced by Raymond Cattell and focuses on the study of the single individual. This technique has been further developed by John Nesselroade and others but is not discussed here.

## ROOTS OF THE PERSON-ORIENTED APPROACH

Early formulation of the person-oriented approach preceded the variable-oriented approach by thousands of years, in the form of the typological approach by which individuals were categorized into different types. It is seen in the classical categorization of individuals into the four basic temperaments: sanguine, phlegmatic, melancholic, and choleric, whereby several individual properties together defined a type. There the organization of these properties within the individual was regarded as the essential feature that describes the person, and it was claimed that this organization can take only one of a limited number of forms. This approach is a natural first step for the "primitive" scientist to take, considering the basic tendency of people cognition to categorize the world around them. In the life sciences, the typological approach is still strong, especially in the social sciences, as exemplified by taxonomy in biology and diagnosis in medicine (see Misiak & Sexton, 1966, for an overview).

The typological approach has to a certain extent fallen into disrepute in the social sciences. The criticism has mainly been directed toward three aspects of earlier formulations of the approach: the often implicit assumption that the typology was innate, the subjectivity usually involved in constructing a typology, and the inability of the typology to represent all the information about the studied subjects. However, none of these limitations, except perhaps the last one, apply to the modern typological research within the person-oriented approach. For a discussion of the promise and limitations of the typological approach, see Bergman and Magnusson (1997) and Waller and Meehl (1998).

The person-oriented approach has emerged in symbiosis with the new developmental science (Cairns, Elder, & Costello, 1996), where a new type of person-oriented research has emerged (Bergman & Magnusson, 1997). It is focused on the integrated study of individual development and is rooted in the holistic-interactionistic research paradigm, which emphasizes a systemic perspective implying continuous interactions and transactions (Magnusson, 1999).

## THE MODERN PERSON-ORIENTED APPROACH

The modern person-oriented approach was first proposed by Magnusson and Allen (1983) and was summarized in the following way: "The person oriented approach to research (in contrast to the variable-centered approach) takes a holistic and dynamic view; the person is conceptualized as an integrated totality rather than as a summation of variables" (p. 372). Thus, individual functioning and development is seen as a dynamic, complex process involving both individual factors (behavioral, mental, biological) and environmental factors (social, cultural). The adaptive properties of the process are stressed, as well as the individual as an active agent in changing his or her environment. In these aspects, the person-oriented view shows similarities to Bronfenbrenner's (1979) multilevel individual-environment system view.

Four basic tenets of the person-oriented approach were presented by Bergman and Magnusson (1997):

1. The process of individual development is partly individual-specific, complex, and contains interacting factors at different levels.
2. A meaningful coherence and structure exists in individual growth and in differences in individuals' process characteristics. It is seen in the development and functioning of all subsystems and in the functioning of the organized totality.
3. Processes are lawful within structures organized and functioning as patterns of operating factors whereby

each factor derives its meaning from its relations to all the others.

4. Theoretically, there exists at a detailed level an infinite variety of differences in process characteristics and observed states, but at a global level there is usually a small number of dominating typical patterns that emerge ("common types").

Three comments are especially pertinent with regard to these tenets: (a) Biological systems tend to be characterized by self-organization, which is a process by which new structures "spontaneously" emerge, even from chaos. In individual development, the operating factors tend to organize in ways to maximize the functioning of each subsystem, and subsystems organize themselves to fulfill their function in the totality. They are organized to ensure survival, and that leads to perpetuation. This principle has been demonstrated in many human biological systems, such as the brain and the respiration system, supporting tenets (3) and (4) above. (b) The tenet concerning common types is also suggested by empirical findings of demonstrated distinct types, for instance often found in biological and ecologic systems (species, ecotypes). Within psychology, Block (1971) discussed "system designs" (p. 110) with more enduring properties and demonstrated longitudinal personality types; Gangestad and Snyder (1985) made a case for the existence of distinct types, each sharing a common source of influence. (c) For the researcher who takes the tenets of the person-oriented approach seriously, using standard variable-oriented methods would normally be seen as questionable, because these methods are not designed to handle patterns of information as undivided units of analysis and or to handle complex interactions and nonlinear relationships (e.g., many variable-oriented methods use the correlation matrix as the data to be analyzed, a matrix that reflects linear relations, not nonlinear relations and interactions).

It should be noted that the person-oriented approach is foremost a theoretical perspective that serves as a guide and framework for carrying out empirical research. Of course, the methods most frequently used within this perspective are various forms of pattern analysis, such as cluster analysis, because in a person-oriented context such methods tend to match the theoretical propositions better than conventional variable-oriented methods.

## TWO CLASSES OF METHODS COMMONLY USED IN PERSON-ORIENTED RESEARCH

As examples, two classes of methods are presented that are commonly used in person-oriented research (for an overview of different methods, see Bergman, Magnusson, & El-Khouri, 2003).

**Classification Using Cluster Analysis or Latent Class Analysis** The purpose of these methods is to divide a sample of individuals (or cities, school classes, and so on) into different groups (called "clusters" or "classes") so that each individual belongs only to one group, all individuals in a group are similar, and the different groups are dissimilar. For this purpose, different types of information can be used, but most commonly the information for each individual consists of a pattern or profile of values in a number of different variables. In *cluster analysis*, the classification is exploratory and empirically driven. Most often a dissimilarity matrix among all individuals is analyzed and some type of algorithm is used to cluster individuals so that the three criteria mentioned above are fulfilled as well as possible. This can be done differently; perhaps most commonly, a hierarchical method is used whereby, at the start, each individual is its own cluster, then the two most similar ones are merged, then of the remaining clusters the two most similar ones are merged, and so on until every individual is in the same cluster. Procedures exist for deciding on the most useful number of clusters to accept and for evaluating the quality of the cluster solution (for overviews, see Bergman, 1998; Gordon, 1981).

This method can be extended to a developmental setting, for instance in the following way. For a longitudinal sample with two measurement points, a cluster analysis is performed at each time point, and then the two cluster memberships of each individual are cross-tabulated (see the description of the LICUR method in Bergman et al., 2003). A more model-based approach can also be used. An example of this is latent structure analysis or *latent class analysis,* which was proposed by Paul Lazarsfeld. In this method it is assumed that a number of latent classes (essential, true groups) exist and that, within each latent class, no relationships exist between the variables because, except for errors of measurement, all individuals in a latent class are identical (the assumption of local independence). From this starting point, a classification is searched that comes as close as possible to fulfilling these conditions and the parameters of the model, and the fit to data can then be estimated (Goodman, 1974). This type of model can be extended to a developmental setting, as is done in latent transition analysis (Collins & Wugalter, 1992).

**Analyzing All Value Patterns as a Goal in Itself** Analyzing all value patterns as a goal in itself is done in *configural frequency analysis*. The variables described by the pattern must be discrete and are often dichotomized to make the number of value patterns to be examined manageable. Configural frequency analysis was originally

suggested by Gustav Lienert and has been further developed, foremost, by von Eye (2002). The basic idea is to list all possible value patterns and analyze which occurs more frequently than expected by chance (types) or less frequently than expected by chance (antitypes). This simple idea has been developed to address the needs of a number of different research questions and designs, as well as developmental ones. A method used rather frequently in sociology—for instance in career research—is *sequence analysis* or optimal matching (see Abbott & Tsay, 2000). In this methodology, time sequences of categorized events are observed, and a procedure has been developed for assessing the dissimilarity between two individuals' sequences (e.g., between two persons' sequences of jobs each year between the ages 20 and 40). Optimal matching builds on a calculation of the costs involved in transforming one of the two sequences into the other. Often the results from optimal matching are subsequently subjected to a cluster analysis to find different sequence types.

## COMMENTS ON THE USE OF THE PERSON-ORIENTED APPROACH

The following two research examples give some indication of the scope of the modern use of the typological approach: Bergman and colleagues (2003) studied stability and change in typical patterns of boys' adjustment problems. For instance, they found that positive and negative adjustment patterns were quite distinct in that no typical pattern occurred that was characterized by good adjustment in some components and bad adjustment in other components, and in a related study it was found that the boys characterized by a multiproblem syndrome often showed adjustment problems at adult age, but that those with just a single or a few adjustment problems did not have a bad prognosis. This could not be seen by standard variable-oriented analyses. Block (1971) studied personality development using longitudinal data and arrived at a typology of longitudinal personality types (he introduced the term "person approach"). These types referred to the "whole" organization of personality, and this knowledge could not have been obtained by an ordinary mainstream approach. Salmela-Aro and Nurmi (2004) studied employees' motivational orientation and well-being at work using a person-oriented approach. The findings indicated the coupling between these two systems, each reflected by its typical patterning of the involved factors, and provided information unattainable within, for instance, a linear model framework. For an overview of person-oriented research as contrasted to variable-oriented research, see Laursen and Hoff (2006).

Broadly speaking, the person-oriented approach is mainly a meta-theoretical research paradigm that has achieved rather wide acceptance. It undoubtedly paints a more complex picture of reality than that offered by the standard "box and arrow" paradigm, whereby variables tend to be seen as dependent or independent in a linear framework, often assuming that the same model holds for all studied subjects. Clearly, the usefulness of applying a person-oriented approach for a research problem depends on what kind of assumptions hold in the specific case. Sometimes the box and arrow types of assumptions are reasonable, or in some cases the needed information from the statistical analyses is straightforward and simple, such as a comparison of means or a correlation. Then there is no need to apply a person-oriented approach, neither theoretically nor by using, for instance, pattern-based methods of analysis. However, if the tenets of the person-oriented approach are fulfilled in the specific case, implying that dynamic interactions and whole-system properties must be taken seriously, then a person-oriented approach is natural, and this standpoint is now more frequently taken in empirical developmental research.

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***Lars R. Bergman***

# PIAGET, JEAN
## *1896–1980*

Jean Piaget was born in Neuchâtel, Switzerland, on August 9 and died in Geneva on September 17. He was a psychologist, epistemologist, logician, and social theorist and is considered the most famous child psychologist of the 20th century. Although many of his views have been questioned, his empirical work and theoretical conceptions changed the way psychologists and life course scholars think about children's psychological development.

### CAREER AND EARLY PUBLICATIONS

Piaget's research program focused on the construction of a genetic (developmental) epistemology, a theory of the way knowledge develops (Kitchener, 1986, in press-a). That theory included child development and the history of science (Piaget, 1950).

Piaget's early interests centered on biology, which provided the backdrop for his subsequent theorizing. After earning a doctorate in science in 1918, he studied psychoanalysis in Zurich and then spent 2 years at the Sorbonne studying psychology and the philosophy of science. He then worked in Alfred Binet's laboratory, standardizing Cyril Burt's reasoning tests for children. That work led him to study children's reasoning and served as the basis for several early articles. During his appointment at the J. J. Rousseau Institute in 1921, Piaget began a systematic study of children's reasoning and then the cognitive development of infants.

In 1925 Piaget occupied the chair in the philosophy of science at Neuchâtel, and in 1929 he was a professor of the history of scientific thought at Geneva. In 1939 he was appointed to a professorship of sociology and then to a chair in experimental psychology at Geneva. In 1955 he established the International Center for Genetic Epistemology at Geneva, where he taught until his death.

### THEORIES AND INTERPRETATIONS

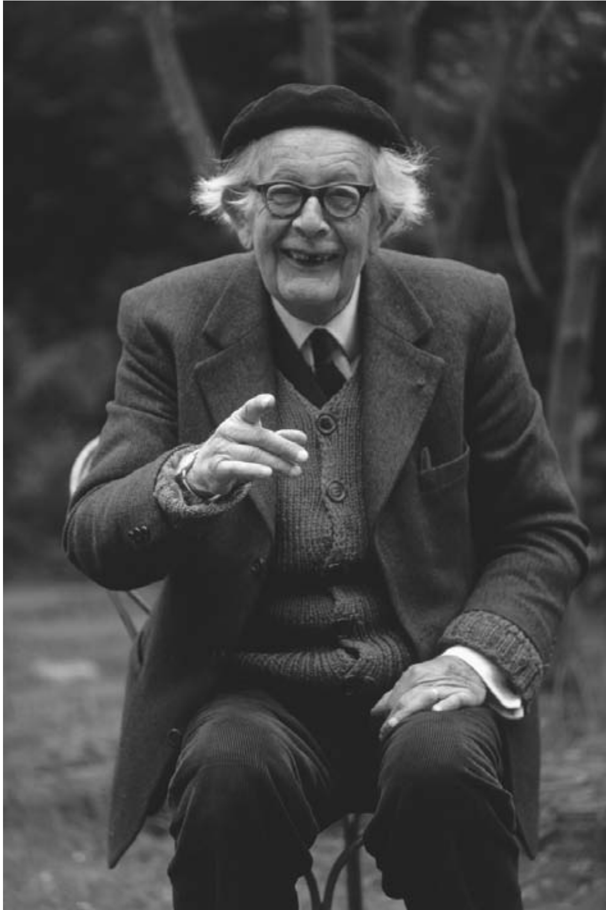
Piaget was not just a child psychologist; in addition to scores of books on children's cognitive development, he wrote several volumes on philosophy (genetic epistemology), sociology, and education. Nevertheless, he continues to be thought of as a child psychologist.

Piaget's theory is widely misunderstood. First, his psychological theory is a theory of cognitive development; other aspects of psychological development (e.g., personality, emotion, gender role identity) were of interest to him only as they related to the child's cognition of the world. Second, his theory is about the development of the child and early adolescent. Piaget believed that by age 14 a person's cognitive architecture and processes are securely established as a necessary foundation for further cognition. After that age, few fundamental changes occur. It is at this point that the organism's reasoning power—its logic—is finalized in terms of the ultimate stage of formal logic.

Piaget saw the child as an organism in relation to its environment; those two aspects could not be ignored or separated. Piaget thus was an interactionist. To satisfy his or her many needs, an individual must adapt to his or her milieu. This process of adaptation involves the dual processes of assimilation (i.e., environmental input is interpreted in terms of the individual's cognitive structure) and accommodation (i.e., the individual's cognitive structure must change to reflect the nature of the environment). The balance between the two processes represents a particular state of equilibrium, and the process leading to that outcome is equilibration.

Because environmental input must be interpreted cognitively, the individual's cognitive structure is crucial. That structure consists of a variety of elements, including concepts, categories, schemas, schemes, images, symbols, and operations. Those elements are constructed by the individual from his or her interaction with the environment and integrated to various degrees over time. The subsequent higher level of representation is based initially on a lower plane of motor behavior (praxis) and occurs through a process of abstraction and integration.

In addition to the structural aspects of cognition, there is a dynamic aspect of change—genesis and development—that results in one structure being modified or replaced by another. Neither of these major



*Jean Piaget.* © FARRELL GREHAN/CORBIS.

aspects—structure or genesis—can be ignored because a structure always is generated from an earlier structure. The course of development follows a particular kind of trajectory depicted as a series of universal and global stages of cognitive development: sensory-motor (age 0 to 2), preoperational (2 to 7), concrete-operational (7 to 11), and formal operational (11 to 15). It is unclear how strongly Piaget believed in the existence of a universal stage theory.

An important issue that emerges from this debate concerns the question of developmental determinism: Is the course of psychological development fixed and set by an underlying process or law of psychological development, or does the individual have freedom with respect to his or her developmental trajectory? If there are universal stages of development, that would appear to support developmental determinism because everyone ideally proceeds through these stages. Many individuals would link such determinism to a genetically fixed biological-psychological program of development; those opposed to such determinism tend to favor an open developmental program or the more radical notion that individuals in some sense can choose (construct) their development freely. Later debates about the precise relationship of genetics and the environment are closely related to this issue. Piaget was clearly a constructivist and interactionist, rejecting both empiricism linked to environmentalism and rationalism linked to nativism. His position that both are involved in the process of constructivism leaves unanswered the question of how, with this approach, one can believe in universal stages and explain the apparent uniformity of behavioral development, at least up to adolescence.

A second issue that has emerged from this position concerns a common criticism of Piaget's theory: that it ignores the social or underestimates its importance or that it is an inadequate theory of the social-cultural. These criticisms often reflect a misunderstanding of Piaget's theory and failure to consider Piaget's (1995) important work, *Sociological Studies*. Running throughout most of Piaget's work is a consistent emphasis on the role of the social in explaining the course of development (Kitchener, in press-b), although the way Piaget conceptualized the nature and importance of the social aspect changed over time. Later scholarship on this question produced a variety of approaches (Carpendale & Mueller, 2004; Smith & Vonèche, 2006).

**SEE ALSO** Volume 1: *Identity Development; Moral Development and Education.*

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*Richard F. Kitchener*

# POLICY, CHILD WELL-BEING

The life course paradigm recognizes that human development varies depending on its historical time and place. This variation is determined, in part, by the public policies applying to a particular geographic locale in a particular historical period. In the 20th and early 21st centuries in the United States, major social policies affecting children's well-being included cash assistance, child care, early childhood education, and after-school programs. Changes in each policy across historical time were affected by demographic shifts in family composition and maternal labor force participation and changing understandings of children's developmental needs. Tensions associated with these policies reflect the interdependence of children's and parents' lives. For example, traditional welfare policies aimed to directly improve children's financial circumstances through cash transfers but sometimes had unintended consequences such as undermining parental incentives to work for pay or encouraging unmarried parenthood. Likewise, conclusions about how to best design child-care policies often differ when they are viewed from the lens of parental-employment supports versus childhood interventions.

## CASH ASSISTANCE

Cash assistance, commonly referred to as *welfare*, provides money to families when an adult provider is unable to do so. Federally funded welfare began as part of the Social Security Act of 1935 with the Aid to Dependent Children (ADC) program, later renamed Aid to Families with Dependent Children (AFDC). Although AFDC was an outgrowth of state mothers' pensions programs that allowed widowed mothers, most of them White, to care for their children, the fraction of AFDC families headed by never-married, divorced, or separated minority mothers quickly rose. In 1938 nearly half of children receiving ADC were living with widowed mothers. By 1961 the percentage had fallen to less than 10. The portion of recipients who were African American increased from 14% to 44% over this same period (Soule & Zylan, 1997, p. 736).

The shifts in demographics of the AFDC recipient population, from White widowed to African-American unmarried women, coincided with broad societal increases in the labor force participation of mothers, including married mothers with young children. These general shifts in maternal employment undermined the premise that the government should support mothers to stay home to raise children when a male breadwinner was unavailable. Divorced and never-married mothers were also seen by conservatives as less deserving of public cash assistance than were families headed by widowed mothers because a living but absent father might have supported the family or the mother might have delayed childbearing until marriage. In addition, analyses of welfare caseloads by social scientists Bane and Ellwood (1994) found that many recipients received benefits for long spells—close to a decade at a time—and arguments by conservative scholars such as Charles Murray (1984) that an open-ended entitlement to welfare might cause dependency gained momentum at the end of the 20th century.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (commonly referred to as PRWORA or simply as welfare reform) fulfilled President Bill Clinton's 1992 campaign promise to "end welfare as we know it," although PRWORA's specifics were shaped by the Republican-controlled Congress that came into power in 1995. The law sent the clear message that cash assistance would be time limited—the program was now called Temporary Assistance to Needy Families (TANF)—and conditional on employment. Recipients had to start a job within two years (with accompanying sanctions for noncompliance) and could receive cash assistance for a total of 5 years across their lifetime. The law also emphasized marriage, for example by permitting states to keep benefits at their prior level when new children were born to an unmarried mother (a *family cap*).

The new law was controversial. Although most agreed that the welfare system needed reform, some believed the law that ultimately passed was too severe, for example by emphasizing "two years and you're off" rather than "two years and you work." Several high-ranking members of Clinton's administration resigned in protest, including social scientists Mary Jo Bane, Peter Edelman, and Wendell Primus. Many social commentators and scholars forecast that child poverty would increase dramatically as families moved from welfare to work without seeing their incomes rise above the poverty line and when families reached their lifetime limits or saw their grants decreased because of caps or sanctioning. Critics also worried that children's well-being would suffer when mothers went to work, because some children's care arrangements would be inferior to care by their mothers, because of the strains on mothers of combining paid work with childrearing, and because of reduced time, attention, and monitoring devoted to children by employed mothers. Others believed, however, that child well-being would improve after welfare reform because families would ultimately have higher incomes, because parents and children would no longer feel the stigma of receiving welfare, and because families would benefit from the structure associated with employment.

The period leading up to and following the major welfare reforms of 1996 also produced increased state-to-state variation in cash assistance to families. Prior to the

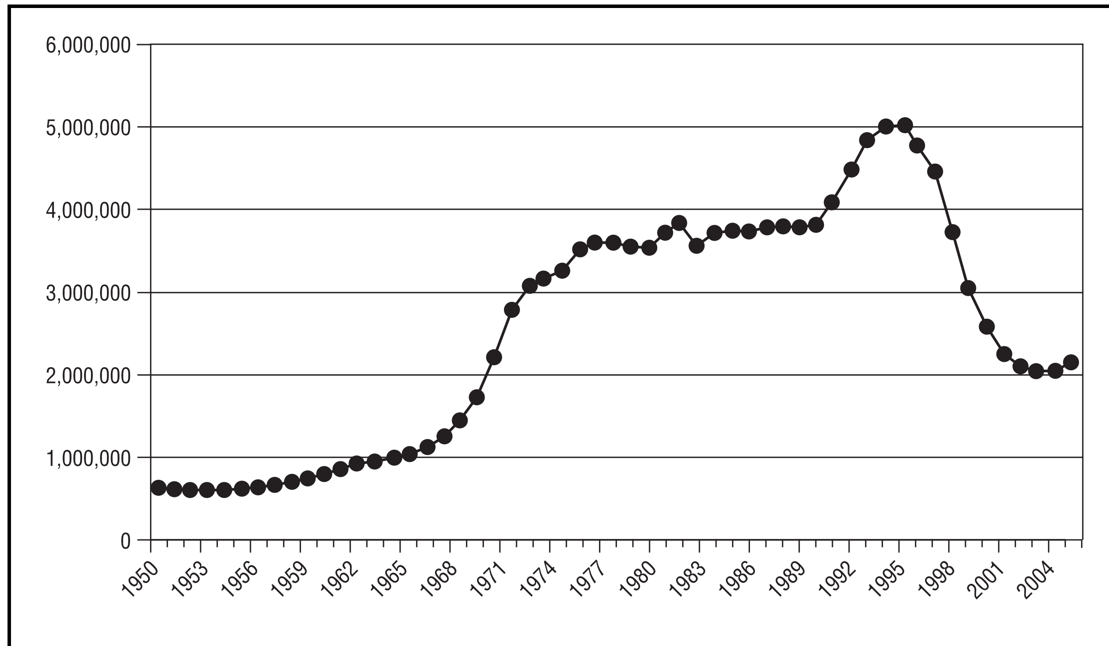


***Figure 1.*** *Number of families receiving AFDC/TANF, 1950–2004.* CENGAGE LEARNING, GALE.

1996 reforms, the federal government granted states waivers that allowed them to experiment with some of the ideas that would become part of the 1996 federal reform, including work requirements, time limits, and family caps. These experiments stimulated research because states were required to evaluate the success or failure of their modified AFDC programs. With PRWORA, TANF funding now came in the form of a *block grant*, giving all states considerable discretion within broad parameters. As a consequence, increasingly over the late 20th and early 21st centuries, a child's well-being vis-à-vis federal cash assistance depended on the state within which he or she lived.

Numerous research efforts—large and small, local and national—have documented how changes in welfare policy affected children and families. These studies all have limitations. Policies typically came in "bundles"—whether as part of randomized or natural experiments—making it difficult to pinpoint which aspect of the policy was associated with child well-being. In addition, state waiver experiments generally preceded the federal welfare reform, and surveys designed specifically to study the federal changes followed it, making it impossible to make statements about the impact of PRWORA itself. The booming economy of the late 1990s and other changes that coincided with the reforms (such as the expansion of the Earned Income Tax Credit [EITC] discussed below) also complicate trend analyses of PRWORA's effects. Nevertheless, consistent findings across studies strengthen the evidence for some conclusions. Highlighted below are general findings in two areas: (a) moving from welfare to employment and associated changes in family income and (b) losing benefits because of family caps, sanctions, and time limits.

**Employment and Poverty** As anticipated, the TANF rolls dropped sharply, beginning in 1997 (see Figure 1). Yet critics' fears of a dramatic rise in poverty did not occur. In fact, overall poverty rates dropped and employment rates of single mothers rose steadily throughout the 1990s. Critics' concerns that child well-being would plummet were also not revealed within studies of work requirements, although variation exists across subgroups.

Two major studies that differ on many dimensions—including their historical timing (before or after federal reform), experimental versus nonexperimental designs, and measures—find variation in outcomes by child's age. The reasons for these findings are not well understood, although both studies suggest changes in income and time use may be contributing factors. An important synthesis of welfare waiver experiments and other random-assignment studies conducted by Manpower Demonstration Research Corporation (MDRC) found that adolescents were more vulnerable to negative effects of work requirements than were preschool children, in terms of school achievement. This was especially evident

for adolescents with younger siblings, suggesting that they may have taken on more responsibilities within the family.

One of the largest surveys specifically designed to study welfare reform (Welfare, Children, and Families: A Three City Study) also found variation in outcomes by child age, although this study's results showed that mothers' transitions into employment were not correlated with changes in preschoolers' outcomes but were associated with increases in adolescents' mental health. The Three City Study found that mothers of older children, but not preschoolers, compensated for time away from home by cutting back on personal time, leaving no net change in total time spent with adolescents. It also found that transitions to employment were correlated with substantial increases in family income, and MDRC's studies suggest that when families' earnings were supplemented by cash assistance some of the income increment was spent purchasing center child care for preschoolers (the group their study found had more positive school outcomes).

When TANF families move into employment, the extent to which they would see such a beneficial rise in earnings depends on the state in which they live. One reason is because of *earned income disregards*, which allow welfare recipients to supplement their wages with cash assistance during their transition into the labor force. The Urban Institute's Welfare Rules Database, which centralized details about state welfare programs from 1996 to 2006, shows that most states included such disregards, although the amount varied substantially across states and typically declined as parents accumulated time in the labor force. The second reason is the Earned Income Tax Credit (EITC). This federal credit provides low-wage earners with a refund of up to several thousand dollars when they file a tax return. The EITC was expanded in 1993, prior to the 1996 welfare reform, and many see it as an important companion to PRWORA's work requirements. Nearly half of the states offer a similar credit to state income taxes, and the state amounts range from an additional 3.5% to 43% of the federal credit.

**Losing Benefits: Sanctions, Time Limits, and Family Caps** There are three major reasons a family might involuntarily lose TANF benefits: (a) their case might be closed for procedural reasons (such as failing to produce documents to verify continued eligibility), (b) they might be sanctioned (such as for not following the rules regarding work requirements), or (c) they might reach their lifetime limit for benefits. States have considerable discretion in defining each of these reasons for losing benefits. Their grant might also be capped at its current level on the birth of a new child. For example, the Welfare Rules Database found sanction amounts ranged from a fraction up to the entire grant, and the duration ranged from the sanction being lifted immediately upon compliance to permanent termination. Regarding lifetime limits, some states permit receipt for just 2 or 3 rather than 5 years, whereas others effectively lengthen the federal limit by *stopping the clock*, for example when families receive cash assistance to supplement earned income.

There is much less evidence on the effect of these specific policies associated with losing benefits than more general research on work requirements. The most general conclusion that emerges is that families who are sanctioned or have their cases closed are more disadvantaged than other families. For example, in the Three City Study, families who lost benefits had lower education, poorer health, and were more likely to report not having enough food than were other families, and sanctioning was correlated with children's behavior problems. Why sanctions and time limits are associated with disadvantage and hardship is unclear. On the one hand, loss of cash assistance might lead to harsher and less consistent parenting or might disrupt children's regular care arrangements. On the other hand, unobserved characteristics that make families more likely to miss an appointment to determine eligibility (and thus lead to procedural case closure) or make it harder for a parent to find and keep a job (and thus lead to violation of work requirements or faster approach of the time limit) may also be associated with poorer child outcomes.

**A Look to the Future** The most consistent findings from studies of welfare reform are that work requirements increase parental employment and earnings with little evidence of negative impacts on child well-being. These findings support public sentiment for a strong work ethic, and a return to unlimited cash assistance is unlikely. Rather, broad-based support of programs such as the Earned Income Tax Credit—which supplement the earnings of those whose behavior conforms to this work ethic—is likely to continue.

Concerns about how to support working families, and how to help parents with the greatest barriers to employment, will also likely persist, especially in times of economic recession. Given the flexibility of TANF block grants, and the dramatic declines in caseloads in the late 1990s, states were able to spend close to two-thirds of their grants on work supports (such as child care, transportation, education, and job training) and on extensions and exemptions to the lifetime time limit. The recession of the early 21st century made it harder for states to continue these supports and exemptions.

TANF was reauthorized by the Deficit Reduction Act of 2005, which kept most features of the program

intact but increased the fraction of TANF recipients that had to be engaged in paid work. The reauthorization also highlighted PRWORA's marriage promotion objectives. These objectives had provided much of the basis for PRWORA and were included in three of the legislation's four stated goals, but were overshadowed by the law's work requirements and time limits in terms of research and policy attention. The reauthorization's annual allocation of $150 million for healthy marriage and responsible fatherhood initiatives reflects a culmination of efforts by the Bush administration to bring marriage promotion to the fore. Prior to the reauthorization, the Bush administration had used several existing funding streams to support programs and research, including waivers in the office of child support and two large-scale random-assignment demonstrations, Supporting Healthy Marriage and Building Strong Families (Ooms, Bouchet, & Parke, 2004). Although the political priority of marriage promotion may change under a new administration, the momentum generated by these demonstrations for research and policy will likely continue.

## CHILDREN'S CARE ARRANGEMENTS

One of the most important supports to employed families is child-care assistance. The *cost*, *quality*, and *availability* of child care are salient issues to parents, advocates, and policymakers. In terms of public policy, child-care *subsidies* and *tax credits* offset some of the cost of care. *Regulations* set a minimum bar on quality, although increasingly states are experimenting with strategies to improve quality beyond a minimum, including through *tiered reimbursement programs*. Availability is less often directly addressed through policy, although policies aimed at cost and quality affect supply indirectly. As with cash assistance, the policy supports and constraints for child care vary considerably from state to state. In addition, how children spend their time when neither with their parents nor in school can be seen through the lens of a child-directed intervention rather than a parent-directed work support. Moves toward *universal prekindergarten* (pre-K) and *extended learning opportunities*, which gained momentum during the mid-1990s, exemplify such child-focused policies.

**Subsidies, Regulations, and Universal Programs** For low-income families, subsidies under the Child Care and Development Fund (CCDF), part of the PRWORA legislation, offset the cost of care. Across states, income eligibility cutoffs range from 34% to 85% of state median income. Parents pay a co-payment, and the state reimburses the provider at a set rate. Typically, the co-pay is higher for higher income families, and the reimbursement rate is higher for center-based than home-based providers, for younger than older children, and in different regions of the state. The federal government recommends that co-payments not exceed 10% of a family's income and that reimbursement rates are at or above the 75th percentile of market rates, but some states set higher co-pays and the majority set lower reimbursement rates. Although this reduces the cost of the state's program and in theory allows more families to be covered, co-payments that are higher than parents can afford reduce participation, while under-market reimbursement rates make the most expensive providers inaccessible, because providers are not required to accept subsidies. The Child and Dependent Care Credit—a federal tax credit—also makes child care more affordable, including for middle-income families. The maximum credit is about half the size of the maximum EITC and is not refundable.

State regulations require group care settings, including all centers and large home-based providers (typically those caring for six or more children), to be licensed. Small home-based providers are license-exempt. Concrete *structural* features of care settings are regulated, such as ratios of staff to children and group sizes. State regulations vary and are often less stringent than standards recommended by child-care accreditation programs. For example, accreditation programs recommend one adult for every four 18-month-olds and one adult for every ten 4-year-olds. Just eight states require ratios these low for toddlers, and only 14 states meet the recommendations for preschoolers. Some states allow one person to care for as many as nine 18-months-olds and as many as twenty 4-year-olds.

States are required to use at least 4% of their TANF funds on initiatives to improve child-care quality. States can meet this objective in a wide variety of ways, from providing resource and referral services to parents to enhanced inspections of licensed providers to investment in caregiver education and training. Tiered reimbursement programs—which provide higher reimbursement rates to providers who rank higher on quality rating systems—have emerged as an innovative mechanism for stimulating quality. Typically the programs include higher program standards for higher rated programs (often through meeting national accreditation standards), accountability measures to assign ratings, outreach to help programs meet higher standards, and parent education to encourage use of the ratings in their child-care decisions.

Most states cover both licensed and license-exempt providers with CCDF subsidies. Beneficially, this means that parents who prefer small home-based providers can receive assistance in paying for them. From the perspective of supporting parental employment, this also means

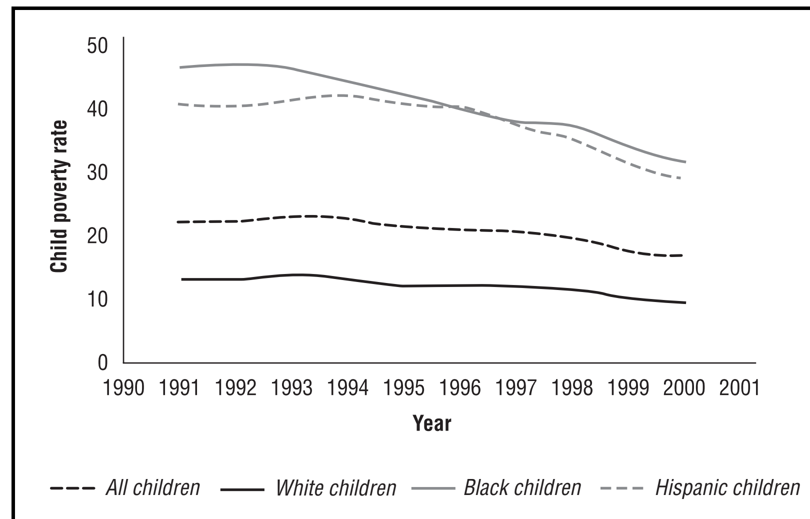


***Figure 2.*** *Child poverty rate by race, 1991–2001.* CENGAGE LEARNING, GALE.

that supply will be maximized, because any adult is a potential caregiver. However, from the perspective of supporting children's well-being, license-exempt and home-based settings score lower on average than centers in terms of providing structured learning activities. Children's safety may also be compromised in some license-exempt settings (or larger home-based settings operating illegally without a license). A unique study by sociologists Wrigley and Dreby (2005) found that although fatality rates in child care were low overall, they were higher in homes than centers. The MDRC synthesis finds that subsidies encourage use of licensed and center care, although direct evidence of associations of subsidies to child well-being is not available.

High-income families have historically used part-day, part-week preschool to enrich children's social and educational experiences. Especially starting in the 1960s, government-funded programs provided similar experiences to lower income children, most prominently through Head Start. Low-income children who participated in model early intervention programs (including the Abecedarian and Perry Preschool programs) with well-designed curricula, skilled staff, and small groups, showed better school achievement and behavioral adjustment than other children. Cost–benefit studies and long-term follow-ups confirm their effectiveness. Historically, Head Start funding levels have not been sufficient to cover all eligible families. Increasingly, states are moving toward funding their own universal preschool programs (see Figure 2). Most state programs target *at-risk* children who are most likely to experience poor school achievement, based on economic disadvantage, disabilities, or other special needs. Just three states aim to cover all children, regardless of risk or income.

Evidence from large-scale efforts, including the citywide Chicago Parent–Child Centers for at-risk children and the statewide Oklahoma universal preschool program, suggests beneficial outcomes can be achieved when programs are scaled up to citywide or statewide levels. Nevertheless, universal programs may shift the costs of preschool from higher income families to the states (in those instances in which these parents would have paid for preschool in the absence of state programs), and debate (and limited knowledge) exists about whether preschool boosts school readiness for middle- and higher income families. There is also concern about whether quality can be maintained in statewide programs. For example, although most state pre-K programs require a staff-to-child ratio of one to ten, only about half require a teacher to have a bachelor's degree. A 2005 study of state pre-K in six states by the National Center for Early Development and Learning found that quality averaged only a minimal rating (Clifford et al., 2005).

**Future Directions** What does the future hold for early care and education? Many call for increased funding of the subsidy program, especially as state TANF surpluses drop. The tension between quantity and quality of care is likely to continue, as are expansions of tiered reimbursement and universal preschool. Efforts such as the Foundation for Child Development's PK–3 initiative further encourage continuity and sustainability so that gains from early education are maintained through the school years (Bogard & Takanishi, 2005). Debate about strategies to care for infants and toddlers and to support quality in home-based care will likely persist as well.

Increasing the supply of infant and toddler care, especially in centers, is expensive (because structural ratios and group sizes are lower than for older children). Quality is typically lower, on average, for this age group, and parents are more likely to express a preference for home-based care for these youngest children. Most states exempt parents from TANF work requirements when their children are young (generally under 1 year of age), and investing in parental leave may be an important complement to expanding infant and toddler care.

Once children enter full-day kindergarten or first grade, the amount of time parents must arrange for care declines (at least for parents who work weekday hours). Historically, the patchwork of opportunities before and after school and in the summertime has received less research and policy attention than early child care. Yet sociologists Entwisle and Alexander (1992) powerfully documented a *summer setback*, whereby poorer children show growth in mathematics test scores comparable to that of higher income children during the school year, but slower growth during the summer. CCDF subsidies and Child and Dependent Care Credits may be used for the care of school-age children up to age 12. In addition, the federal 21st Century Community Learning Centers support objectives of the No Child Left Behind Act of 2001 through an array of academic enrichment services in out-of-school hours, including tutoring and homework assistance. Some states also fund their own after-school programs. In a 2006 survey, 27 states had funding dedicated explicitly to after-school programs, 8 states included after-school programs as one of a menu of options in certain streams, and 15 states had no dedicated after-school funding (Stedron & Thatcher, 2007).

*Extended learning* is a new conceptualization of children's time that emphasizes integration and continuity across contexts. In part, this reflects new pressure for after-school programs to help support learning under strict accountability standards, although not all agree that after-school programs can and should meet these expanded purposes. In addition, as children move into adolescence, they are increasingly active decision-makers about where and how they spend their time, and thus their perceptions of a setting's quality become increasingly important. Maintaining steady participation is challenging, especially among older youth. Similar to the situation in early care, innovation and evaluation of strategies to monitor and stimulate the dimensions of quality in after-school programs that best reflect youth interests and support their well-being are likely to continue.

**SEE ALSO** Volume 1: *Child Care and Early Education; Family and Household Structure, Childhood and Adolescence; Policy, Education; Poverty, Childhood and Adolescence.*

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***Rachel A. Gordon***

# POLICY, EDUCATION

The United States public education system is characterized by several features that influence the nature of educational policies, the relative success or failure of their implementation, and policy outcomes.

## INVESTMENT AND DECENTRALIZATION

First, in the United States the federal government, states, and localities spend more than most other industrialized nations on public schools but invest relatively less in social welfare programs (social security, housing, health care, etc.) (Hochschild & Scovronik, 2003). This large investment of resources in public education reflects the national faith in the power of the public educational system—and in educational policies specifically—to address a broad range of social, economic, and political problems (Hochschild & Scovronick, 2003). Public schools are expected to provide a means for children to attain a desired occupational level and to equalize the opportunities of children with disadvantages in terms of race, social class, or special needs status and to prepare students to be informed participants in the democratic process (Hochschild & Scovronick, 2003). These multiple and often conflicting goals influence not only the types of policies that are adopted and implemented, but these goals also influence whether policies are considered successful, on what measures, and by whom.

Second, the U.S. public education system is highly decentralized compared with those of other industrialized nations. Whereas most countries centralize school governance, curriculum decisions, and finance at the federal level, the U.S. system vests most authority over those issues in states and localities. Funding for education is largely the responsibility of states and local governments as well; federal spending on education constitutes a small fraction of overall school spending, accounting for 9% of the estimated $1 trillion spent in fiscal year 2007 (U.S. Department of Education, 2008). This reliance on local funding for education and local control has allowed a relatively greater degree of community influence and input than is given to localities in other nations, yet this decentralized structure also has meant that public school students in the United States often find themselves in what Hochschild and Scovronick (2003) termed "nested structures of inequality": in states with dramatically different levels of funding and capacity, in districts with vastly unequal funding levels, within schools that have differential allocations of qualified teachers. Each of these nested structures shapes educational policy outcomes in profound ways.

This entry on educational policymaking, policy implementation, and educational policy research covers three major educational policies that have affected public schools in the late 20th and early 21st centuries: (a) Title 1 and the ensuing accountability requirements through No Child Left Behind (NCLB); (b) school desegregation policy designed to equalize access and opportunity across highly unequal school contexts; and (c) school choice policy, which has been designed to hold schools accountable through competitive market forces. Each of these policies differs dramatically in its origins (the courts or the federal, state, and local governments), goals, and outcomes. Thus, this entry explores the diverse ways in which success has been defined in each of these policies and on what measures.

## TITLE 1 AND NO CHILD LEFT BEHIND

One of the most significant policies that has affected public schools since the 1960s has been Title 1, first enacted as part of the Elementary and Secondary Education Act (ESEA) of 1965. It emerged in an era in which great faith had been placed in the power of government, especially the federal government, to address social inequality. Title 1, which granted significant federal funding for public education for the first time, was intended to provide greater equity in resources for higher-poverty urban school districts and ameliorate the disadvantages of poverty.

At the time it was enacted, Title 1 contained few provisions dealing with school accountability for fear that such provisions would be perceived as federal intrusion into local educational decisions and lessen the chances for passage (Halperin, 1975). However, a subsequent amendment written by Senator Robert F. Kennedy required states to adopt "effective procedures, including provision for appropriate objective measurements of educational achievement . . . for evaluating at least annually the effectiveness of the programs in meeting the special

educational needs of culturally deprived children" (cited in Halperin, 1975, p. 8). Those initial efforts to hold districts and schools accountable were entirely procedural and revolved around the appropriate and effective use of federal monies, or "inputs."

It was not until the 1990s that the inputs-driven model of accountability shifted to reflect the growing popularity of systemic reform, a school reform model that is based on the assumption that schools should be given greater regulatory flexibility with day-to-day operations, or "inputs," in exchange for increased accountability for test scores and other "outputs." In the late 1980s the National Governors Association embraced this model of reform, with a strong leading role taken by then Governor Bill Clinton of Arkansas. When Clinton became president, his reauthorized 1994 version of ESEA, known as the Improving America's Schools Act (IASA), was retooled to reflect the principles of systemic reform. States receiving Title 1 monies were required to develop content and performance standards and adopt assessments that were aligned to those standards to hold their schools accountable. This outcome-driven accountability under IASA in 1994 made modest strides: By 2000 most states had some sort of accountability system in place, but most of those systems were not well developed (Sunderman, Kim, & Orfield, 2005). Before the enactment of NCLB only 19 states had fully approved systems under IASA, largely as a result of inadequate capacity at the state and local levels (Sunderman et al., 2005).

When Governor George W. Bush of Texas was elected president in 2000, he arrived from the state that arguably had made the most progress under the outcomes-driven accountability model promoted under IASA, one that involved strict timelines, strong state intervention, and a focus on testing outcomes. His first legislative priority was to reauthorize ESEA under that model, and in 2001 a bipartisan coalition helped him push through his first major legislative achievement, No Child Left Behind, which he signed into law in January 2002.

NCLB marked a dramatic increase in federal intervention into public education (Elmore, 2002). The law requires all states to develop content standards and measure the progress of students through annual testing in English/language arts, mathematics, and science in the third through eighth grades and to test students once in high school. The law also mandates that 95% of students must be tested and that all teachers in core subject areas must be "highly qualified." States also must develop Annual Measurable Objectives (AMOs) to determine whether their schools are making Annual Yearly Progress (AYP). According to the legislation, 100% of schools must demonstrate proficiency in reading and math by the 2013–2014 school year.

Strict sanctions are imposed for nonperformance: If a school fails to make AYP for two consecutive years on the same indicator, it is identified for the first year of program improvement and districts must offer those students the choice to attend a nonfailing school. Failure to make the required improvement for three consecutive years on the same indicator entitles students to "supplemental services" such as tutoring (paid for out of school funds), failure the fourth year dictates "corrective action" (replacing staff, new curriculum), and failure the fifth year allows more drastic measures, including conversion to charter school status, reconstitution, or takeover by a state or private management agency.

Although some researchers have documented gains in achievement since the enactment of NCLB (National Center for Education Statistics, 2005a), others have found that achievement gaps have not changed on cross-state measures such as the National Assessment of Educational Progress, a cross-state student achievement test (Lee, 2006). Other researchers have raised questions about the effectiveness of this punitive model of school reform; for example, researchers have found that schools that are more diverse and thus have a greater number of student subgroups to be accountable for are disproportionately likely to be identified for improvement status and become the target of NCLB sanctions. A 2008 study by the U.S. Department of Education found that schools identified for improvement were disproportionately urban, high-poverty schools and that "school poverty and district size better predicted existing improvement status than the improvement strategies undertaken by the schools" (U.S. Department of Education, 2008, p. xii). Researchers also have found that schools have narrowed their curricula to focus much more heavily on tested subject areas while cutting time in science, social studies, music, art, and physical education (Center on Education Policy, 2007).

As policymakers take on the task of reauthorizing NCLB, it is likely that the legislation will stay intact but undergo significant modifications. Proposed changes include granting greater flexibility to states and school districts in meeting achievement targets through growth models and granting states more flexibility in the kinds of sanctions they impose on schools in need of improvement.

## SCHOOL DESEGREGATION POLICY

School desegregation policy has had an impact on virtually all urban school districts in the United States. Although desegregation is not an educational policy in the formal sense of the term, state and federal court orders mandating desegregation have given way to a wide

range of federal, state, and local policies to comply with those decisions.

The implementation of school desegregation varied greatly across local contexts. Ironically, desegregation was most successful in the Southern states, in which district boundaries encompassed entire counties; in those districts suburbs could not escape the reach of court mandates. In contrast, implementation of desegregation in Northern and Midwestern metropolitan areas, in which central-city school districts were usually smaller and surrounded by dozens of smaller self-contained suburban districts, was virtually impossible after the U.S. Supreme Court's *Milliken I* decision in 1974, which made cross-district desegregation legally unfeasible.

Most current data show that schools across the United States largely have resegregated. According to research by E. Frankenberg, C. Lee, and G. Orfield (2003), although significant gains in integration were made in the South through the late 1980s, integration levels everywhere declined since that time and in the first decade of the 21st century were lower than they had been in 1970 for both African Americans and Latinos. At the same time high-minority schools are more likely to be high-poverty than in the past (Frankenberg, Lee, & Orfield, 2003). At the same time that segregation levels have been worsening, the nature of school segregation in the United States has also changed dramatically. However, although segregation levels have been worsening, the nature of segregation has changed dramatically. As Charles Clotfelter's research has found, in 1970, the majority of school segregation was within school distirct boundaries, and just 43% of school segregation was between school districts; by 2000 the proportion of segregation that was between-district jumped to 70.8% (Clotfelter, 2004). Thus, court orders, which usually are intradistrict only, are less likely to ameliorate these between-district inequalities.

Research on the outcomes of school desegregation has focused on short-term effects on achievement and peer relations and on "long-term" effects in terms of social mobility, rates of college attendance, and life after graduation. The literature on short-term effects has shown that while students are in school, desegregation has resulted in slight achievement gains for African-American students and has had no impact on achievement for Whites. This literature has found that desegreation also has resulted in more positive intergroup relations (Schofield, 1995). Research on longer-term impacts has documented more uniformly positive effects: Desegregation has had a positive impact on the aspirations of African-American students, and African-American graduates of desegregated schools are more likely to attend integrated colleges and have higher levels of educational attainment. African-American graduates of desegregated schools are also more likely to have desegregated social networks and work in white-collar occupations (Wells, 1995).

Although a series of U.S. Supreme Court decisions have led to the dismantling of many mandatory court-ordered desegregation plans (Orfield & Eaton, 1996), a number of localities have maintained integrated schools voluntarily. Those voluntary efforts, however, might have been endangered after the 2007 *Parents Involved in Community Schools v. Seattle School District No. 1 et al.* ruling by the U.S. Supreme Court, which circumscribed the conditions under which school districts may pursue voluntary measures. The ultimate influence of this decision on voluntary desegregation is unclear; in light of the growing problem of between-district segregation, many researchers observe that any integration efforts will need to cross district lines.

## SCHOOL CHOICE POLICY

School choice policies are diverse, reflecting the different historical contexts from which they evolved. In the 1960s support was strong for both alternative schools, which were based on progressive education models, and magnet schools, which were designed to promote voluntary desegregation through choice. In the 1980s and 1990s many states adopted intra- and interdistrict open enrollment policies as a way to promote school improvement through competition. These efforts expanded in the 1990s as a growing number of states enacted charter school legislation, and several states enacted voucher legislation; in 2002 school choice became a cornerstone of NCLB.

Proponents of choice believe that schools will perform better if they are subjected to competitive market forces. However, researchers studying achievement results from school choice programs have been faced with a number of methodological challenges, the most significant of which is selection bias: Most students who enroll in school choice programs come from families with measured differences in terms of family background (income and education levels) compared with students who do not enroll as well as unmeasured differences such as greater parental savvy in navigating the school system. Although attempts are made to factor out these differences, the validity of research continues to be challenged as a result of these issues.

Critics of school choice fear that choice will exacerbate racial, ethnic, and income stratification between schools. Research has shown that this depends on the type of choice policy. Many researchers have found that more deregulated choice policies such as vouchers and charter schools, which have fewer controls on choice and fewer requirements for transportation or parent information, typically lead to greater stratification across

schools. The more regulated policies, which have strong parental information requirements, racial and economic balance requirements, and provide transportation, tend to lead to reduced stratification. Each of these types of choice policies is examined below.

**Vouchers** Four publicly funded voucher programs were in operation in the first decade of the 21st century: the Milwaukee Parental Choice Program (MPCP) for low-income students, which began in 1990; the Cleveland Scholarship and Tutoring Program (CSTP), which was authorized in 1995 for low-income families in that city, and a statewide program in Ohio, EdChoice, which began in the 2006–2007 school year; and, in Washington, D.C., the D.C. School Choice Incentive Act, which was authorized in January 2004 for low-income students in that district. Enrollments in the programs are relatively low: The enrollment in Milwaukee reached 19,233 students in 123 schools in the 2007–2008 school year, short of the 22,500 student cap (Wisconsin Department of Public Instruction, 2008). The Cleveland program enrolled 6,300 students in the 2006–2007 school year (National School Boards Association, 2007). Enrollment in the statewide program in Ohio was approximately 7,000 in the 2007–2008 school year, well short of the 14,000-student cap (School Choice Ohio, 2008), and in 2008 the program was slated for elimination by the governor. The Washington, D.C., program reached its enrollment cap of approximately 2,000 students in the 2006–2007 school year, which included 2.3% of the district's students (U.S. Government Accountability Office, 2007). There are also privately funded voucher programs in a number of major U.S. cities.

Evaluating the effect of voucher programs on student achievement has been difficult because private schools generally are not required to administer standardized tests. Limited evidence from voucher programs has found either no overall gains (U.S. Government Accountability Office, 2001, Witte, Stern, & Thorn, 1995) or limited gains for some subgroups of students in some grades but not others; those gains generally have faded over time (Howell & Peterson, 2002, Ladd, 2002).

Few evaluators have examined stratification in voucher programs because most of the programs are restricted to low-income students. However, research on the Cleveland program has found that students of color utilized the CSTP vouchers at a disproportionately low rate and that the majority of students entering the CSTP had been enrolled in private schools (without using vouchers) the prior year. Students entering the CSTP from private schools were more likely to be White (Plucker, Muller, Hansen, Ravert, & Makel, 2006).

The 2002 U.S. Supreme Court ruling in *Zelman v. Simmons-Harris* opened the door for publicly funded voucher programs that allow the use of vouchers at parochial schools in states that do not have constitutions that prohibit such programs. However, these programs have not expanded dramatically since that time; an effort to enact a statewide program in Utah was defeated, and the EdChoice program in Ohio faced elimination after its first year of operation.

**Charter Schools** Since the early 1990s, 40 states and the District of Columbia have enacted legislation authorizing charter schools, which are schools of choice that are freed from many of the regulations that apply to regular public schools in exchange for greater accountability to their authorizing entity (usually a school board, a university, or a state board of education), which can "revoke" the charter and close a school for nonperformance. In 2004–2005, 1.8% of all students (887,243 students) in the United States were enrolled in 3,294 charter schools (National Center for Education Statistics, 2007). Charter schools are situated largely in urban areas (52%) and largely in the Western states (National Center for Education Statistics, 2007).

Research on the impact of charter schools on student achievement has been mixed. Some studies show positive gains (Hoxby & Rockoff, 2005), but others show no measurable differences (Miron & Nelson, 2000) and still others show poorer performance in comparing charter school students with their regular public school counterparts (National Center for Education Statistics, 2005b).

With respect to the impact of charter schools on school stratification, most data have indicated that at the aggregate level charter schools serve a relatively greater diversity of students than do public schools (National Center for Education Statistics, 2007). However, when data are examined at the local level, charter schools tend to be more segregated by race and social class than their public school counterparts (Frankenberg & Lee, 2003). A number of researchers also have pointed out that charters have relatively greater control over student enrollment through the requirement of parent involvement and behavior contracts and thus are able to select students who may look demographically similar but differ in subtle but important ways (Becker, Nakagawa, & Corwin, 1997).

Despite this mixed evidence, charter schools enjoy widespread support and have been promoted as an option for students in failing schools under NCLB, with significant federal support for their expansion. They are likely to remain a strong component of the choice landscape.

**Magnet Schools** Magnet schools represent one of the longest-standing school choice policies in the United States, originating in the efforts of central-city school systems to stem middle-class flight and foster voluntary desegregation within city borders (Wells, 1993). Magnet

schools, which usually are created around a particular curricular or academic focus, have been included in nearly all school desegregation plans since 1980 (Wells, 1993), and ongoing though fluctuating federal support for magnet schools has existed since the 1970s through the reauthorization of NCLB.

Although recent national statistics are not available, estimates from the 1999–2000 school year indicate that "there were 3,026 magnet schools with explicit desegregation objectives enrolling 2.5 million students. However, if one also counts magnet (or specialty) schools without explicit desegregation objectives, the estimate increases to 5,576 schools and 4.5 million children" (National Center for Education Statistics, 2007, p. 5).

Magnet schools are distinct from the more recent, more deregulated charter and voucher programs in that magnets are designed specifically to foster racial diversity and typically include both requirements and funding for parental information and transportation. Extra resources usually are funneled into those programs, and demands for slots are usually quite high.

Research on academic achievement in magnet schools has been more positive than evidence from voucher and charter school programs (Gamoran, 1996, Goldhaber, 1999). However, some researchers have raised concerns about the within-school segregation that has occurred in magnet schools, as many magnets are "schools within schools" that separate students into specialized programs apart from the regular student population (West, 1994). Other research has raised concerns that lower-income parents utilize magnet schools at relatively lower rates (Saporito, 2003).

Magnet schools have had long-standing political support, and funds were included for their support under NCLB. However, the ability of magnets to achieve their original goal of racial diversity may be curtailed in light of the 2007 *Parents Involved* ruling and the growing restrictions on the use of race in admissions.

**SEE ALSO** Volume 1: *Academic Achievement; College Enrollment; High-Stakes Testing; Private Schools; Racial Inequality in Education; School Tracking; Segregation, School; Socioeconomic Inequality in Education.*

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# POLITICAL SOCIALIZATION

*Political socialization* can be defined as the processes by which a person acquires the necessary skills to function in the political world. While political socialization is an ongoing and changing process that occurs over a lifetime, researchers have primarily focused on how children, teenagers, and young adults learn about politics. If individuals can learn about and participate in civic life as children and adolescents, then hopefully they will continue this civic participation throughout the life course.

Since the mid-1990s there has been a resurgence of political socialization research both domestically and internationally. Although each discipline emphasizes different processes and factors, researchers in mass communication, political science, developmental psychology, education, and other fields are focusing on political socialization. Some even suggest that this renewed interest heralds the "rebirth" of political socialization research (Niemi and Hepburn, 1995).

Researchers have identified three primary agents of political socialization: parents, school, and the media. Parents and the family were originally viewed as the primary agents of political socialization, and early research emphasized a transmission model that suggested children would model the political attitudes and behavior of their parents. More recent research has instead found that children are not a blank slate, and the processes of political socialization are affected by variables such as the child's age, ethnicity and socio-economic status, parents' educational level, and family communication patterns (e.g., McDevitt and Chaffee, 2002).

Similar to the role of parents, early research found that school plays a very important role in the political socialization of children and young adults. However, recent research on schools finds their effects to be more complex. The amount of political and civic knowledge learned in high school is generally low, but is more effectively learned when active teaching methods are used. The *entire* school experience is now understood to be contributing to citizen development. This includes both extracurricular activities at school and voluntary civic participation within the community.

Researchers in the early 21st century also understand that mass media variables such as TV news watching, newspaper reading, and Internet news are all important antecedents of political socialization (e.g., Atkin, 1981; McLeod, 2000). Television in particular is a "bridge to politics" for young people that can bring to life political concepts learned in school.

Theoretically, political socialization fits into a larger body of work that attempts to measure youth and adolescence in a changing world (e.g., Flanagan and Sherrod, 1999). Researchers understand that there are external, conditional, and historical factors that often affect youth development. Periods and events such as the 1960s in the United States, the breakup of the Soviet Union, the end of

communism in the 1990s, the events of 9/11, and the 2008 presidential campaign of Barack Obama have had profound effects on youth and their political socialization.

**SEE ALSO** Volume 1: *Activity Participation, Childhood and Adolescence; Civic Engagement, Childhood and Adolescence; Data Sources, Childhood and Adolescence; Socialization;* Volume 2: *Political Behavior and Orientations, Adulthood; Social Movements.*

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## POVERTY, CHILDHOOD AND ADOLESCENCE

For several industrialized nations, especially the United States, the proportion of children under age 18 in poverty has been a long-standing concern. In 2000 the United States had the highest child poverty rate among all developed countries with 16.2% of children younger than 18 years old deemed poor. The nations with the next highest child poverty rates in 2000 were Canada and Australia at 14%. Among European Union members in 2000, the United Kingdom had about 10% of children considered poor, whereas about 7% of children in Italy and Germany were poor. Norway and Belgium have some of the lowest rates of child poverty at about 4.5%.

Although the United States was conspicuous by having the highest child poverty rate among developed countries in 2000, that rate was below its highest child poverty rate of 20.8% in 1995. In 1995 children 0 to 5 years of age had the highest rates of poverty at about 22%. Overall, approximately 10% of American children who are poor are extremely poor—that is, they live in households with incomes less than 50% of the amount that distinguishes the poverty line—and approximately 6 million children who are extremely poor are younger than 6. In the United States and other developed nations, the proportion of children that live in poverty varies by region, educational levels of parents, race and ethnicity, and family structure.

Noticeable fluctuations have occurred in rates of child poverty over time in the United States. Child poverty rates have varied greatly across the 1970s (14.4% in 1973), 1990s (21% in 1990), and mid-2000s (17% in 2006). Overall, for the United States, poverty rates for both non-Hispanic White and minority children have decreased since 1980, but the total child poverty rate has remained constant. The persistence of the overall child poverty rate across time can be attributed to the growing diversity of the child population in the United States alongside the economic disadvantage of minority groups relative to non-Hispanic Whites. For instance, between 1980 and 2006, the proportion of minority children increased from roughly 25% to more than 40%. Also, in 2006 the poverty rate among minority children of 27% was nearly three times the rate for non-Hispanic White children (10%). No doubt, unrelentingly high child poverty rates in the United States stem partly from the fast-changing composition of the child population.

The lack of progress in reducing child poverty in the United States over time contrasts with the progress made in reducing poverty among the American elderly. Since the late 1960s, the proportion of poor persons older than 65 years of age has steadily decreased from 25% in the mid-1960s to 9% in 2006. Evidence suggests that although Social Security and Medicare drove down the poverty rate among the elderly by transferring enough aid, which was adjusted to keep pace with inflation and cost of living increases, the several public transfer programs for poor children have been ineffective at driving down their poverty rate. Unsurprisingly then, the 2006 child poverty rate of 17% in the United States was nearly double the rate for elderly Americans.

Apart from the estimates of child poverty at any given time in a country, the longer a child stays poor in that country, the harder it is for the family to sustain expenditures on goods and services that are important to that child's development. In addition, prolonged low income fuels social exclusion, which can have long-lasting consequences. Historically among developed nations, the United States has recorded some of the highest figures for children remaining in poverty from one year to the next. Around 6–7% of American children in the poorest one-fifth of families in one year are still there the next year. Moreover, in the United States some 5–6% of children were in the poorest one-fifth in each of 10 consecutive years. For the latter group of children, mobility and opportunity appear extremely limited and signals the substantial persistence of low family income.

## MEASUREMENT OF CHILD POVERTY

The base of knowledge about child poverty rates and factors associated with variation in those rates are produced mostly from countries' annual national-level census data. Less common but steadily growing is the use of longitudinal data, which follows children as they grow up and then transition into adulthood, to generate knowledge about the consequences of growing up poor. For the latter sources of data, two main types of surveys have been used: general household panels that follow a random sample of households for successive years and studies of birth cohorts that trace a group of children born around the same time. Using the longitudinal data, researchers have sought to explore questions at the core of life course research, such as the links between disadvantage during childhood and outcomes for children during childhood and adolescence as well as in adulthood.

Most of the research using longitudinal data has occurred in the United States using the Panel Study of Income Dynamics, which started in 1968 and is a very rich source of information regarding the different stages of childhood, spells of poverty, and links to later adult outcomes. The United Kingdom has also conducted considerable longitudinal research using birth cohort data from 1958 and 1970 and, more recently, the British Household Panel Study (begun in 1991) and the Millennium Cohort. Other countries, such as Canada, Australia, New Zealand, as well as the European Union, have started household panels, cohort studies, or both so they can not only produce annual estimates of child poverty but estimates of the effects of income, family structure, and deprivation on children's health and later adult outcomes.

Greater use of scientifically generated longitudinal data will undoubtedly occur in the future as scholars and policy makers aim to precisely monitor trends in child poverty, better understand why so many children are poor, and improve estimates of the impact of childhood poverty on children's later adult lives. Moreover, research will continue efforts to broaden the conception of childhood poverty so that the multidimensionality of the problem is recognized and measured rather than remaining reliant on income alone to measure child poverty. Using only income to conceptualize poverty among children is a narrow approach and does not capture the actual experiences of children. Further, this practice reinforces a unidimensional perspective on child poverty that can overlook issues of social exclusion and stratification.

## CORRELATES OF CHILD POVERTY

High rates of childhood poverty in the United States are attributable to several demographic and economic factors, including growing wage inequality, increasingly ineffective antipoverty programs, and rising numbers of single-parent families. Certainly, the erosion of earnings among lower educated workers (e.g., both high school dropouts and high school graduates) is associated with higher child poverty rates. In the first decade of the 2000s the least educated workers earn far less than their counterparts of three or four decades ago. Because the economy has shifted from an industrial to a technological and informational one, wages of the least educated have steadily eroded. Free trade agreements, increased capital flows to developing countries, low minimum wages, and more offshore manufacturing have lowered the demand for manual and low-skill workers in the United States and thereby reduced their earning power. Hence, the number of the working poor, or workers whose income is below the poverty line, has risen noticeably. In 2006, two-thirds of all children growing up in poverty in the United States had one or more working parents and one-third had a parent working full-time year round.

When trying to understand why so many children are poor in America, it is important to remember that whereas the items used to measure poverty have stayed the same over time, the items that can impoverish families have changed. In 1965 the poverty line was set at three times the cost of the basic food basket for a family of a given size. Back then, food items drove poverty-line calculations. However, the costs of many other items overlooked at the time, such as housing, childcare, and transportation, have increased much faster than food items. In other words, items once thought unimportant to families' (necessary) expenditures are necessities now; these new items, such as childcare, are significant financial outlays for families in the early 21st century, especially those families that are minorities or headed by single parents.

Currently, about three-quarters of American households spend over half of their income on rent, and about one-quarter of those households are overcrowded. For a child that lives at the 2008 poverty level, his or her family has only about 60% of the purchasing power of a family that lived at the poverty level four decades ago. Moreover, whereas the welfare system has become less generous and benefits have declined in real dollars, more children compared to the 1960s are fully welfare dependent—that is, they have no other sources of income except public income transfers.

Besides dramatic economic transformations, the striking increase in single-parent families over the past 20 to 30 years is also associated with child poverty. In 1970 the number of single-parent families with children under the age of 18 was 3.8 million. By 1990 the number had more than doubled to 9.7 million. Of these single-parent

***Family Attempts to Re-settle.*** *Shanika Reaux's children Da-Vone Lewis (C), 2, O-Neil Lewis (R), 1, and Tatiana Lewis (L), 6 months, wait for a bus in New Orleans, LA.* GETTY IMAGES.

families, most are headed by females. These single mothers raising children have the highest rate of poverty across all demographic groups. Although the annual statistics shift from year to year, at least 55% of children who live in single-parent, fatherless families are poor compared with about 10% of children in two-parent families. Fatherless families are more likely to be poor because of the lower earning capacity of women, inadequate public assistance and childcare subsidies, and lack of enforced child support from nonresidential fathers. The median annual income for female-headed households with children under 6 years old is roughly one-fourth that of two-parent families; however, the number of children per family unit is generally comparable at approximately two per household.

## EFFECTS OF CHILD POVERTY

Numerous studies report the effects of poverty on an individual's life during his or her childhood or later during his or her adult years. Studies of the effects of poverty on an individual's outcomes during his or her childhood have focused on physical, cognitive, behavioral, and emotional outcomes. Although a multitude of outcomes within these childhood domains have been examined, most studies have sought to discover whether poor children have had higher rates of mortality, morbidity, teenage pregnancy, environmental distress, high school noncompletion, alcohol and drug abuse, school exclusions, and lower self-esteem compared with nonpoor children. Although the findings are oftentimes mixed, many of the studies strongly suggest that the magnitude of the effect of child poverty during children and later adulthood is not just a function of the incidence of child poverty but of its duration and severity as well.

Studies of the impact of child poverty on physical outcomes for children have documented that poverty is associated with higher rates of poor health and chronic health conditions among children. National surveys find that compared with parents who are not poor, parents who are poor more often rate their children's health as *fair* or *poor* and are less likely to rate their children's health as *excellent*. Children who are poor have higher rates of hospital admissions, disability days, and death rates. They also have inadequate access to preventive,

curative, and emergency care and are affected more frequently by poor nutrition. Finally, many studies have documented the association between child poverty and teenage motherhood. Adolescents who are poor are three times as likely to have a child born out of wedlock than adolescents who are not poor. These births are associated with increased rates of low birth weight and perinatal and postnatal complications. Other studies suggest that childhood poverty may negatively affect children's intelligence and educational achievement and hence their later adult productivity, employability, and welfare use. Many studies using a variety of data sources that have compared poor children with nonpoor children suggest that children's IQ test scores are associated with poverty. Also, as noted earlier, a child's educational attainment is shaped by the incidence and duration of poverty experienced earlier in the life course.

Another body of research that possesses a more ecological perspective has suggested that childhood poverty is associated with many environmental and contextual inequalities. Compared with nonpoor children, poor children are exposed to more family violence, marital instability, parental separation, and household compositional changes. Psychological studies have documented that poor children's parents are more authoritarian (i.e., they use higher levels of control but less parental warmth in their childrearing tactics), read less to their children, and are less involved in their children's school activities. The children also have fewer educational resources at home, such as books and computers, but watch more television. Poor children live in noisier, more crowded homes that need repair and receive fewer services from local organizations. Exposure to lead hazards is yet another example of how the ecology of poverty directly impacts child health. Four to 5 million children, the vast majority of whom are poor, reside in older homes with lead levels exceeding the accepted threshold for safety. More than 1.5 million of these children (younger than 6 years) have elevated blood lead levels. Thus, the environment associated with child poverty includes multiple risk factors that are far from conducive to healthy child development.

Even in the absence of consequences for children either in the short term or in later adulthood, society might be concerned about the effects of child poverty for social justice and equity reasons. Children have little control over their economic circumstances, which might result from their parents' ill-informed decisions. Apart from children representing an investment in the future, society may wish to protect children because it is just and fair. Overall, poverty among children diverts resources that could be used elsewhere, reduces the future stock of human capital, and creates a variety of social problems from which all people might suffer. Hence, as discussed earlier, the effects of prolonged income deprivation among children may only be fully realized when they are adults.

## ONGOING RESEARCH

As of 2008, studies can point only to the correlations between childhood poverty and outcomes in later adult life. Ideally, researchers would like to show a causal link between childhood poverty and later adult outcomes based on solid theory.

One such theoretical argument is that income levels represent the level of investments in children. Higher income investments translate into higher child consumption of goods and services and, hence, better outcomes now and later (e.g., improved physical health). An alternative theory suggests that the value of higher income is that higher levels of income lower parents' stress levels, thereby improving their parenting and, hence, their children's development. Yet another theory asserts that income from employment is important not because of the level of income per se but because working parents are valuable role models for their children, and they transfer positive norms about work to their children.

Even if income safeguards a high standard of living for children, some argue that income is still not the key determinant of children's future outcomes. Susan Mayer (1997) contended that parental characteristics in the workplace (e.g., reliability and interpersonal skills) enhance children's later outcomes net of parental income. In other words, parental characteristics independent of their income have a larger effect on IQ scores, educational attainment, and employability. This line of research reveals that low income does indeed have a genuine impact on a range of future events for a child net of other factors associated with income but that the effect of low-income status during childhood on later adult outcomes is not as large as was first thought. For example, the effect of child poverty on high school dropout rates might not be as great as first thought. Mayer (1997) noted that if the poorest one-fifth of families in the United State had their income doubled, then that increase would lower the high school dropout rate only from 17.3% to 16.1%. Other researchers, such as Dan Levy and Greg Duncan (2000), disagreed and found that the degree to which household income level during childhood affects later adult outcomes is far from overstated. Overall, at this stage the debate continues over the causal mechanisms between childhood poverty and later adult outcomes and the magnitudes of the estimated correlations.

Having accurate estimates of the effects of low income during childhood on later adult outcomes and child well-being is fundamental to effective policy interventions. In the United States, the welfare system now places a great emphasis on labor force participation among parents but not necessarily on earnings that raise living standards. The distinction is important because employment without income growth among poor parents may mean that poor children gain little. Indeed, the employment demonstration projects that have been conducted seem to indicate that

employment programs for welfare mothers that failed to raise earnings had little impact on child well-being. At the same time, increased work effort among welfare mothers had no ill effects on their children either. In contrast, work programs that increased incomes among single mothers seemed to have positive effects on child well-being. Another factor that policy makers must consider is that even if raising income is a blunt policy instrument for improving poor children's outcomes, this device might still have greater promise in the short and long term than attempts to change parenting skills or values.

Without better research on the immediate and long-term impact of child poverty, social policy is bound to remain in the political arena. The policy prescriptions advocated will reflect that politicization. Some will argue that the eradication of child poverty must be based on parents' choices with respect to work. Others will claim that the solution to child poverty requires government promoting social change. Like other social problems, the solution to child poverty lay somewhere between both opposing viewpoints because no one factor will ever, by itself, totally explain child poverty. Certainly, in nations such as the United States that possess such a diverse population, a multifaceted strategy to reducing child poverty is imperative. That approach for the United States and numerous other developed countries must include macroeconomic policies that raise incomes, social policies that strengthen families, and work-family policies that help low-income families balance work and family responsibilities and seize labor market opportunities.

**SEE ALSO** Volume 1: *Family and Household Structure, Childhood and Adolescence; Health Differentials/ Disparities, Childhood and Adolescence; Policy, Child Well-Being; Neighborhood Context, Childhood and Adolescence; Socioeconomic Inequality in Education.*

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## PRE-SCHOOL

**SEE** Volume 1: *Child Care and Early Education; School Readiness.*

## PRIMARY SCHOOL

**SEE** Volume 1: *Stages of Schooling.*

## PRIVATE SCHOOLS

Contemporary understandings of private or independent schools are the product of the mass institutionalization of public education. Virtually all schooling was once private. It was in the late 1700s when some European governments

began to erect mass public education systems. North American jurisdictions initiated their public systems in the early to mid-1800s. Across the Western world, public school systems were institutionalized over the 20th century, and these systems were rapidly built in developing nations after World War II (1939–1945) (Boli, Ramirez, & Meyer, 1985; Meyer, Ramirez, & Soysal, 1992). In the early 21st century, public schools that, in principle, make themselves universally accessible across gender, ethnic, racial, and regional lines are global in nature. As a result, private schools are typically framed as those educational bodies that are not mandated for all children by a national, regional, or local government and that are not fully funded through state-raised taxes. Indeed, though many kinds of religious and elite private schools predate their public counterparts, today they distinguish themselves as independent alternatives to mass public schooling.

The criteria that demarcate private and public schools vary greatly around the world. Different levels and forms of governance, accreditation, and funding coexist across and within nation-states (Forsey, Davies, & Walford, 2008). In North America, private schools are typically defined as those that are not fully governed, or fully funded, by governments. In this essay, the focus is specifically on North American private schools. In the United States and Canada, the common school tradition idealizes neighborhood public schools as cradles of democracy, equalizers of economic opportunity, and the foundation of a shared civic culture. This historical norm shapes policy debates that arise about private schools, such as the degree to which governments should fund such schools. American advocates of school choice, such as authors John Chubb and Terry Moe (1990), for instance, champion voucher programs that would extend public monies to private schools, an initiative they associate with parental rights, equity, and educational quality. Canadian advocates of charter schools or vouchers similarly cite American policy experiments, or the writings of Chubb and Moe, Milton Friedman (1912–2006), or economist Caroline Hoxby to buttress their claims, but then adapt these ideas for their own peculiar landscape, where virtually all provinces already fund religious schools, there are no political principles to separate church and state, and there is less of the antistate rhetoric that is so popular in the United States.

## TRENDS IN PRIVATE SCHOOL ENROLLMENT

As of 2006 about 11% of all American students are enrolled in private schools, a decline from previous decades (National Center for Education Statistics, 2006). The comparable figure in Canada is about 8%, a sizable increase from previous decades (Guppy, 2005). Why are nominally private enrollments falling in the United States but rising in Canada? Some important trends are masked by these figures. Notably, the American decline in private enrollments is largely because of dropping attendance in Catholic schools. Further, that decline obscures the fact that semiprivate alternatives in the United States, such as magnet schools, charter schools, homeschooling, and voucher experiments, are rapidly growing. Moreover, there are different forms of choice in Canada. Many provinces fully fund Catholic schools and consider them to be public, and some provinces extend funds to independent schools. Yet Canada has far fewer charter schools and no voucher experiments. In general, many students in both nations are choosing to attend schools other than their local, regular public school, and these numbers appear to be growing.

## TYPES OF PRIVATE SCHOOLS

Private schools in North America are not all alike, of course. The demand for these schools is sometimes associated directly with certain social statuses, but sometimes it reflects more purely pedagogical preferences. These varying associations form the basis for three distinct subsectors of private schools. Those schools that incorporate the teaching of religion into their curriculum represent the largest subsector, and in many jurisdictions, they are public schools' main competitors for students—distinguished in the public eye by their disciplinary climate, moral instruction, uniforms, and other symbols of community identity. So-called *elite* schools cater to high socioeconomic groups, often have long histories, and assume boarding school forms. Within the elite sector, school reputations are strongly conditioned by their students' socioeconomic status. The prestige of much-sought-after elite boarding schools stems as much from their symbols of tradition (premodern architecture, plush lawns, classical curricula) as from their particular instruction. Third-sector schools (Davies & Quirke, 2007), in contrast, are characterized less by the social statuses of their students (e.g., socioeconomic status or religion) and more by their brands of pedagogy and curricula, particularly specialities for languages, science, sports, and people with disabilities. These schools forge their identities more on cognitive grounds than on moral or socioeconomic reputations.

## IMPACT OF PUBLIC SCHOOL ATTENDANCE

What is the hypothesized impact of private schools on students? Much research has been done on three major facets of private schooling: social organization, social inequality, and socialization.

Advocates such as Chubb and Moe (1990) voice two bold claims about the social organization of private schools. First, they declare that private schools have an

## SINGLE-SEX SCHOOLS

In the United States at least 366 schools have single-sex classrooms and 88 public schools are completely single-sex, according to the National Association for Single Sex Public Education. Private schools are far more likely than public schools to offer single-sex education. Many teachers and parents argue that students learn better when not distracted by the opposite sex, but others counter that the real world is not segregated by sex and therefore single-sex schools do not prepare students for the actual work environment. Those in favor of single-sex schools believe that gender differences exist in the brain, which leads to different learning and behavioral styles for boys and girls, and that single-sex schools reduce the amount of unhealthy competition and distraction students of the opposite sex provide. Opponents of single-sex schools believe that coeducational institutions can spark different kinds of learning for every student; the diversity of having both boys and girls in the classroom is beneficial to the understanding of ideas and viewpoints; and schools attended by both genders will better prepare students to interact with a more diverse population. Some also question whether single-sex schools violate the 14th Amendment to the Constitution, which states that schools must be integrated. In general, the majority of the American public does not endorse single-sex schooling (68%), but with mounting concerns over how the education system may advantage or disadvantage one sex, discussions of utilizing single-sex schools continues.

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advantage over their public counterparts because the former are more directly subject to market pressures and are less constrained by bureaucratic regulation. They argue that state governance encourages public schools to conform to legal conventions instead of providing incentives for effective instruction. Bureaucratic shackles, such as having labor unions demand the hiring of certified teachers, boards impose curricular guidelines, and governments leverage instructional practices by funding formulae, discourage public schools from directly responding to the needs of their clients. Reducing state bureaucracy in education is said to eliminate the need for mindless rule-following, allowing schools to shed ineffective structures and to redirect their energies to solving pedagogical problems. A competitive marketplace is touted as more sharply rewarding pedagogical success, punishing pedagogical failure, and encouraging schools to clarify their missions, demonstrate their effectiveness, and satisfy customers.

However, scholars who study educational markets have encountered a situation that is considerably more complex than this theory allows. Competitive forces do not always spawn school variety; parental incentives to choose schools can vary greatly, and parents do not always equate school quality with performance on standardized test scores (Belfield & Levin, 2002; Davies & Quirke, 2007).

A second rationale for private schools centers not on market competition but on their alleged ability to foster effective school communities. For a quarter century, American scholars have investigated whether Catholic schools provide learning environments that are superior to those in public schools. Beginning in the early 1980s, author James Coleman (1990) and his colleagues contended that Catholic schools produce higher levels of learning. Their central concern was whether or not cultural and network characteristics of school communities can boost student achievement. Coleman focused not on market competition per se but on functional communities in schools. A functional community, according to Coleman, enjoys durable parental networks, widespread feelings of trust, caring and social responsibility, and effective norms of reciprocal obligation—all of which can enhance student learning. Schools are said to draw these resources from broader functional community ties. Coleman contended that teachers, parents, and students in Catholic schools utilize bonds that are forged through their common affiliation with the Catholic church and that these bonds raise educational expectations among these stakeholders. Coleman also argued that because public schools lack a comparable institution to reinforce such norms, those schools cannot generate similar levels of social capital. In the 1980s critics disputed these claims for a variety of reasons, but a second generation of studies, utilizing superior analytic techniques and forms of data, has tended to confirm the existence of Catholic school effects. The research debate has been redirected from whether or not those effects actually exist toward specifying their particular form and identifying their causal mechanisms (Hallinan, 2006; Morgan, 2000).

The degree to which private schools reinforce inequality may differ by subsector. Traditionally, the demand for elite private schools has come from the wealthiest rungs of society (Cookson & Persell, 1985), and most observers concede that elite schools largely serve

***Catholic School.*** *A seventh-grade class makes the sign of the cross after a class prayer at St. Rose Catholic School, in Newtown, CT.* AP IMAGES.

to prepare the privileged to assume positions of power. However, a livelier American debate focuses on whether religious private schools, particularly Catholic schools, can provide equitable outcomes for disadvantaged populations. Coleman (1990) contended that Catholic schools lessen the effects of poverty and minority status on student achievement, compared to their public counterparts. Likewise, advocates of school choice, such as Chubb and Moe, contend that poorer parents are most motivated to take advantage of voucher programs because they are far more likely to be trapped in substandard schools and less likely to be able to afford private school tuition or to live in neighborhoods with superior public schools. In contrast, opponents claim that wealthier and more educated parents are likelier to seek Catholic schools and choice programs because they are more knowledgeable about schooling, are more comfortable discussing school issues with professionals and other parents, and have better information networks. The empirical literature on choice offers a mixed assessment. Many American studies show that parents who seek private schools, charter schools, and homeschooling generally have above-average levels of education, income, and socioeconomic status within their communities and that these traits tend to explain most of the achievement advantages they enjoy over public schools (Lubienski & Lubienski, 2006).

Do private schools socialize students in unique ways? Private schools are typically proclaimed to facilitate higher levels of social control, less deviance, and healthier school climates. However, scholars face a major challenge when addressing this question because of the strong possibility that student outcomes may reflect selection effects as well as the independent effects of schools themselves. That is, because private schools are usually smaller, have wealthier and more homogeneous student populations, and are free to offer distinct missions, like-minded families may self-select into those schools. Student outcomes may reflect more readily the characteristics of those self-selecting families than the efforts of private educators. Research suggests that religious schools influence a student's sense of well-being and enhance community participation, over and above their prior levels of religiosity (Schneider, Hoogstra, Chang, & Sexton, 2006). Research on the elite subsector suggests that boarding schools can resemble total institutions, in which students are surrounded by their peers at all hours that, covertly or overtly, teach each other how to dress, speak, act, and think. At the extreme, the intense experience of boarding schools can encourage some students to adapt by resorting to drugs and alcohol, or by committing white-collar crimes, such as purchasing upcoming tests and exams, study notes, and homework assignments, as well as forging notes and passes. This deviance is frequently hidden from adults through a code of silence that is policed in dense peer networks (Cookson & Persell, 1985). But, in regular day private schools, research has not clearly established whether or not student behavior varies drastically between private and public schools, once family and community characteristics are controlled. Overall, although there are clear differences between private schools and public schools, there is no consensus among researchers as to whether private schools have unique impacts on students that are independent of the traits of students themselves.

**SEE ALSO** Volume 1: *Academic Achievement; Coleman, James; Gender and Education; Policy, Education; Racial Inequality in Education; School Tracking; Social Development; Socioeconomic Inequality in Education; Stages of Schooling.*

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# PUBERTY

Puberty, one of the few universals in early development, involves a set of biological events that produce profound change throughout the human body. For both boys and girls, these physiological changes come about through complex interactions among the brain, the pituitary gland, the gonads, and the environment. For girls, the typical sequence of physical change includes a significant growth spurt, weight gain, breast development and pubic hair growth, and the onset of menstruation. Boys also undergo a significant growth spurt and weight gain along with voice changes and penile growth. Although these sequences are fairly standard, the onset and tempo of changes can vary considerably. For girls, puberty typically begins between the ages 8 to 14, and for boys, between ages 9 to 15. The progression or speed with which young people undergo these changes is also variable. As a result, young people who are the same chronological age can vary considerably in terms of physical development. In all, the amount of physical growth experienced during this period is second only to growth experienced during the first year of life.

Because puberty also ushers in adolescence, the significance of this transition extends beyond the physiological or biological. Simply put, the appearance of adult physical characteristics is often linked with adult expectations of behavior (Graber, Petersen, & Brooks-Gunn, 1996). Thus, young peoples' transformed bodies signal their reproductive capacity, which, in turn, often ushers in a more sexualized image of the self and elicits new expectations from others (Caspi, Lynam, Moffit, and Silva, 1993; Martin, 1996). This biopsychosocial process is gendered, according to empirical studies. Although boys' bodies change in dramatic ways and these changes affect the way they understand themselves and are perceived by others, the more pressing social and psychological consequences of puberty are more pronounced for girls than boys. But for both, puberty is a *life course transition*, a physical change that also redefines social roles and brings about new social expectations and obligations.

## HISTORICAL AND DEVELOPMENTAL PERSPECTIVES

The timing of the pubertal events as well as the social and psychological implications of puberty have fluctuated throughout different historical periods. At the population level, increased affluence, changing diets, and rising levels of obesity have contributed to a secular decline in age of pubertal onset for American boys and girls (Herman-Giddens, Slora, Wasserman, Bourdony et al., 1999; Herman-Giddens, Wang, & Koch, 2001). For instance, the average age at menarche at the start of the 20th century was around 15 or 16; at the turn of the 21st century the average age is around 12.5 (Brumberg, 1997). Similarly, American boys today are taller, heavier, and show earlier genital maturation and pubic hair growth than did boys in the late 1960s and 1970s (Hermans-Giddens et al, 2001). These changes have spurred a lot of press coverage and public concern about pubescent elementary school children but, by and large, menstruating second graders remain an anomaly.

These changes in the pubertal process, however, remain meaningful. Although the age at onset of puberty has declined, no parallel acceleration in young people's

emotional and cognitive skills has occurred, meaning girls and boys in the early 21st century may look adult-like at 12 or 13 but their thinking is still that of a young girl or boy. Thus, a gap or mismatch between the physical and socio-emotional development of young people is evident (Petersen, Crockett, Richards, and Boxer, 1988). At the same time, the salience of the body, especially for girls, and the cultural context in which young people transition into adolescence has shifted in important ways. In *The Body Project* (1997), Joan Jacobs Brumberg examined girls' diaries from the 1830s through the 1990s to understand changes in the social construction of American girlhood. She argues that over time, the female body has become the primary expression of girls' identity; the body is *the* thing to be managed and maintained but also treated with increasing ambivalence. Moreover, contemporary American culture, more so than ever, emphasizes the importance of sex, sexualizes the female adolescent figure, and provides fewer social protections for young people. Together, these biological, psychological, and social changes make puberty an important piece of the story of adolescence.

## PUBERTAL STATUS AND TIMING

Two key dimensions of puberty are *pubertal status* and *pubertal timing*. Both have been used to examine the relationship between puberty and adolescent adjustment. Pubertal status, on the one hand, refers to the level of physical development that young people have reached (e.g., prepubertal, midpubertal, postpubertal), without reference to chronological age. On the other hand, pubertal timing refers to whether young peoples' development is early, on-time, or late compared with their same-age, same-sex peers (Graber et al, 1996). Clearly, these dimensions are related but the expected role each plays in adolescent development is different.

Many different methods have been used to measure pubertal status, ranging from intrusive bone x-rays and physical examinations with unclothed adolescents to single item reports of overall development based on observer reports. Probably the most commonly used method for measuring pubertal development is the Pubertal Development Scale, a self-report of pubertal status obtained through interview or questionnaire (Petersen et al, 1988; Ge, Conger, and Elder, 1996). With this instrument, adolescents rate their own level of development, on a scale of 1 (not begun) to 4 (development completed), on a set of pubertal indicators. All are asked about body hair development, growth spurt, and skin changes. Girls also rate breast development and whether they have begun menstruation and boys rate the development of facial hair and voice change.

Pubertal timing is a relative concept, and thus is defined by a measure of pubertal status that is compared across same-age peers. For girls, age at menarche is probably the most extensively used measure of pubertal timing (Stattin and Magnusson, 1990). Although menarche typically occurs later in the sequence of pubertal development, approximately 6 to 12 months following the height spurt and after the development of secondary sex characteristics, it is the event around which girls organize and assimilate the myriad changes that define this transition. It is also the event around which social roles and expectations about behavior, sexual behavior in particular, are cemented by others, parents especially. This indicator also has good reliability, women and girls easily recall this date, and, because it is anchored in time, can be reported on retrospectively. For boys there is no single pubertal event that has either the salience of menarche or its measurement properties. Therefore, scholars often use an age-standardized indicator of development and then define pubertal timing as one standard deviation above or below the average as early or late.

An emerging focus among puberty scholars is an examination of the social and environmental forces that predict pubertal timing. The timing of pubertal changes is influenced by a host of factors including genes, socioeconomic status, diet, environmental toxins, prepubertal fat and body weight, and chronic stress. This last factor, chronic stress, has been the focus of recent work on pubertal timing. Operationalized with indicators of maternal and paternal parenting behaviors, chronic stress in the family environment was associated with an accelerated transition to puberty among girls only (Belsky, Steinberg, Houts, Friedman et al, 2007). Others have addressed the question of timing by using twin and sibling design studies to explore genetic and environmental factors. Work by Ge and colleagues (2007) suggests that, for both girls and boys, about half of all individual differences in pubertal timing was explained by genetic factors and the other half by environmental factors that siblings may not necessarily share, such as nutrition, health status, and early family environment.

Research focused on pubertal development is often guided by the *stressful change hypothesis*, which posits that the changes that define puberty, regardless of when they occur, are stressful for young people. This hypothesis rests on the notion that change is inherently stressful and this stress is often expressed with feelings of psychological distress and increased emotional distance in relationships with parents immediately following puberty. For instance, adolescents often become less involved in family activities shortly after the onset of puberty (Collins, 1990).

Much of the current research on puberty, however, centers on its timing. Variability in age at onset can be pronounced; according to the life course perspective, the significance of a life course transition is dependent, in part, on when it occurs. Ample evidence has documented that timing has significant implications for the lives of girls (Caspi et al. 1993; Cavanagh 2004; Cavanagh, Riegle-Crumb, and Crosnoe, 2007; Haynie 2003; Ge et al, 1996; Graber et al, 1996; Stattin and Magnusson, 1990) and, to a lesser extent, boys (Felson and Haynie, 2002).

Two hypotheses have been proposed to understand the relationship between the pubertal timing and young people's social, psychological, and behavioral outcomes: the off-time hypothesis and the early-maturing hypothesis. The *off-time hypothesis* states that, compared to those who transition on-time, young people who are either early or later maturing will experience more psychological and social problems. Based on the deviance proposition, departure from the normative developmental schedule is less socially desirable and even stressful. Because early and later maturing adolescents depart from this timetable and are visibly different from their peers, at a moment when being like everyone else matters a great deal, off-time adolescents are hypothesized to be at heightened risk for psychological and behavioral problems (Ge et al, 1996). The *early-maturing hypothesis*, on the other hand, focuses exclusively on early maturers. Because they are physically different and perceived as older by peers and adults, early maturers enter the social world of adolescence sooner, doing so with neither the support of their larger peer group nor the development time needed to acquire and integrate the skills needed to confront the new tasks in adolescence (Ge et al, 1996).

Empirical tests of these hypotheses indicate that early maturation, more so than off-time maturation, and particularly for girls, is associated with a host of negative outcomes (Stattin and Magnusson, 1990; Ge et al, 1996; Haynie, 2003; Cavanagh, Riegle-Crumb, and Crosnoe, 2007). During adolescence, early maturing girls are more likely to drink, smoke, and engage in minor delinquent behaviors (Haynie, 2003; Stattin and Magnusson, 1990), become sexually active earlier (Udry, 1988), report higher levels of psychological distress (Ge et al., 1996), and do less well in school (Cavanagh et al, 2007) than other girls. There is also evidence that early pubertal timing is associated with how these young women transition to adulthood, with early maturing girls less likely to graduate from high school and also to cohabit and marry sooner.

Often framed as a biosocial model of adolescent development, these associations come about through the *social* interpretation, by the adolescent as well as those around her, of the physiological and biological changes of early puberty (Stattin and Magnusson, 1990). Specifically, three main social psychological processes are often invoked to explain these links. First, early pubertal timing affects girls' perceptions of self. By virtue of their earlier transition to adolescence, early maturing girls are more likely to be physically out-of-step (i.e., greater breast development and curviness) with age mates at a developmental moment when both the body and social comparison increase in significance. Thus, early maturing girls perceive themselves as different and older. This feeling of difference is often associated with a negative self-appraisal, which, in turn, can heighten their risk for psychological distress and depression (Ge et al, 1996).

Second, early pubertal timing is linked with girls' peer relationships. Because early maturing girls and their peers attribute greater maturity to them than is warranted by their age, early maturing girls are more likely to select and/or be drawn into less normative friendship groups, ones that include older boys and girls and are characterized by riskier behavior and lower academic achievement (Haynie, 2003). Finally, early maturing girls are often embedded in social contexts that offer them opportunities to engage in riskier behaviors. And, because these girls had less time to integrate the coping skills needed to manage the new tasks in adolescence, they negotiate these "opportunities" often without the socio-emotional resources they need to make healthier choices (Haynie, 2003).

Two factors are worth noting. To the extent that researchers have had both hormone and social data on girls, the risks associated with early puberty timing for girls is not simply a function of hormones driving both girls' pubertal timing and behavior. Rather, the social psychological interpretation of this transition plays a key role (Udry, 1988). Second, the risks associated with early puberty do not occur as soon as menarche begins, at age 10 or 11. Instead, risks emerge as adolescent girls are granted more autonomy and independence from parents, establish more intense and intimate relationships with peers, and explore both platonic and romantic relationships with boys. In other words, the disruptive social psychological consequences of early puberty become most pronounced between 8th through 10th grades (Stattin and Magnusson, 1990).

Do these associations hold for boys? The research is less definitive. Some of the earliest work exploring the effect of pubertal timing on boys' adjustment found that early puberty was *positively* associated with their social status, such that early maturing boys, who appeared taller and older relative to their same-age peers, were more popular than others. Moreover, researchers who had both hormone and social data for boys found that the observed puberty and sexual behaviors link was largely spurious, or caused by some third factor. Unlike for girls, increases in

hormones drove both pubertal development and boys' sexual behavior (Udry, 1988). These findings, combined with difficulty in measuring boys' pubertal timing and the nearly consistent negative findings for girls, limited the scientific inquiry regarding puberty for boys.

More recently, there has been renewed interest in understanding pubertal timing in the lives of boys, but still, the story remains ambiguous. On one hand, consistent with findings for girls, some studies suggest that early puberty is associated with increased psychological distress (Ge et al, 1996), delinquency, and sexual behavior (Felson and Haynie, 2002). On the other hand, there is also evidence that pubertal timing is also associated with better psychological functioning, more friends, and better academic achievement for boys (Felson and Haynie, 2002).

## RACE/ETHNIC DIFFERENCES

Much of the empirical work upon which this biosocial model of adolescent behavior was developed is based on non-representative samples of White youth. Yet important race/ethnic group differences in the factors that comprise this model are evident. For instance, African-American girls reach each pubertal marker significantly earlier than do White girls (Herman-Giddens et al, 1997; Obeidallah, Brennan, Brooks-Gunn, Kindlon et al, 2000). Similarly, the median age of onset of pubic hair growth and genital development is earlier for African-American boys compared with White or Hispanic boys (Herman-Giddens et al, 2001). At the same time, the significance of an "ideal" body may vary by race and ethnicity. Latinas and, especially, White girls react more negatively to body changes at puberty than do African-American girls (Brumberg, 1997), while African -American girls seem better able to thwart the negative feelings that unattainable body images can instill. Thus, what defines "early" as well as the some of the social psychological affect of being early varies by race and ethnicity.

With these differences in mind, Cavanagh (2004) examined whether the biosocial model of development predicted girls' transition to first sex across race and ethnic groups. Using a sample of White, African-American, and Latina girls, within-group analyses revealed important race and ethnic differences in the linkages among pubertal timing, friendship groups, and sexual debut. Support for the biosocial model was found for Whites and, to a lesser extent, Latinas. Little support, however, was found for African-American girls. At the same time, Ge and colleagues (2006), studying a sample of African-American children living in Iowa and Georgia, found that pubertal timing was associated with child reports of internalizing symptoms (feeling lonely or depressed) and externalizing symptoms (acting out in class, or engaging in verbal or physical fights with peers) for both boys and girls. A continued focus on race/ethnic differences and similarities in the biosocial model of development remains an important task.

In the future, researchers will likely continue to focus on the social and genetic factors that predict pubertal timing. Research also may more explicitly incorporate genetic data in studies of biosocial development, where puberty is both an outcome and predictor, to define the study of pubertal development in the future.

**SEE ALSO** Volume 1: *Body Image, Childhood and Adolescence; Dating and Romantic Relationships, Childhood and Adolescence; Sexual Activity, Adolescent; Socialization, Gender.*

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# R

## RACIAL INEQUALITY IN EDUCATION

Historically, education has been a battleground for racial and ethnic minorities fighting to gain access to valued resources and credentials. The struggle for equal access to quality schooling has been painstakingly slow and the resistance to integration extreme. Nonetheless, people look to schools to promote equality in society at large. Despite the common perception of schools as the "great equalizer," education researchers continually find most racial and ethnic students still lag behind their White peers in terms of achievement, graduation rates, and college completion. The U.S. public educational system remains one of the most unequal of the industrialized nations. This entry provides a summary of research on U.S. racial differences in education, the long-term implications of these differences, and the theories that attempt to explain inequality in public schools, along with an overview of the main cause of these differences, and then concluding with two contemporary discussions within the study of racial inequality in education. As the U.S. population becomes increasingly diverse, understanding racial and ethnic variation in educational attainment and achievement is imperative.

### DIFFERENCES IN ATTAINMENT, DROPOUT RATES, PERFORMANCE, AND COURSE TAKING

Since the late 1970s, gaps in educational achievement have narrowed and educational aspirations are consistently high across all racial and ethnic groups. Yet, significant differences in high school and college attainment remain. On average, Asians and Whites have the highest probability of graduation at each level of education, followed by Blacks, Native Americans, and Hispanics/Latinos; but all racial and ethnic groups have increased their average rates of educational attainment over time. Researchers caution, however, that much variation within ethnic groups exists. For example, among Asian Americans, Chinese, Japanese, and Asian Indians have significantly higher graduation rates than Vietnamese, Laotians, and Hmong. Additionally, one's generation affects high school graduation rates. For Latinos, high school completion rates increase with each generation, but for Asian and White ethnic groups they increase only from the immigrant to the second generation (i.e., the children of immigrants) (Kao & Thompson, 2003). Although educational attainment differences across racial and ethnic groups are narrowing for high school completion, figures from the early 21st century show that inequalities still persist and are increasing at the postsecondary level. According to the 2000 U.S. census, approximately 44% of Asians and Pacific Islanders, 28% of Whites, 17% of Blacks, and 11% of Hispanics/Latinos above 25 years of age had earned a bachelor's degree or higher.

Research also finds that Blacks, Latinos, and Native Americans are more likely than Whites or Asians to drop out of high school, and that students who attend schools with high Black or Latino populations experience higher dropout. There are significant differences, however, across and between ethnic groups. For example, Rumberger (1995) found that socioeconomic status (SES), defined as the measure of an individual's or family's relative economic and social ranking, predicts dropout rates for Latinos and Whites, but not for African

Americans. Low grades, behavioral issues, and changing schools increase dropout rates for Blacks and Whites, but not for Latinos. Absenteeism predicts dropout rates for all racial and ethnic groups. Furthermore, immigrants—especially recent immigrants—are more likely to drop out than native-born students (White & Kaufman, 1997). White and Kaufman (1997) find that once factors such as generation, language, and social capital are controlled, ethnicity effects have only a minor impact on dropping out for Latinos. They also advise that substantial ethnic differences in school performance and expectations lead to variations in dropout rates across ethnic groups. But *social capital*, the ability of adult family members to invest attention, support, values, and advice in children, can be an important factor in reducing the odds of dropping out.

Standardized test scores of African Americans continue to lag behind Whites in math and reading, but this gap is narrowing. According to data from the National Assessment of Educational Progress, the Black–White reading gap for 17-year-olds shrank by 50%, and the math gap by nearly 30%, between 1971 and 1996 (Jencks & Phillips, 1998). Parental SES accounted for much but not all of the Black–White test gap (Kao, Tienda, & Schneider, 1996). Similarly, the White–Latino performance gap has narrowed over time. Asians, however, perform above or comparable to that of Whites, particularly on mathematics assessments. Ethnic and racial patterns in grades mirror that of test scores and are heavily influenced by parental SES. Using data on eighth graders from the National Education Longitudinal Study of 1988, Kao et al. (1996) found that Asians had the highest grade point average (3.24), followed by Whites (2.96), Hispanics/Latinos (2.74), and African Americans (2.73).

In many schools, students are sorted by tracks or ability groups. In general, when ability and other background characteristics are controlled, most research on the determinants of ability group assignment provides little evidence of a direct effect of race on initial placement or subsequent reassignment. Research has shown, however, that low-income and racial and ethnic minorities are disproportionately placed in low-ability groups in elementary school and in vocational tracks in middle and high school. Additionally, Hallinan (1994) found that Black students are more likely to drop to a lower track than White students and are less likely to be reassigned to higher ability groups.

## LONG-TERM IMPLICATIONS OF EDUCATIONAL INEQUALITY

In many ways, the racial and ethnic inequality in American education parallels inequality in the country's occupational hierarchy. High school diplomas and bachelor's degrees are important credentials that influence potential labor market outcomes, and research shows persuasively that occupational disadvantages experienced by racial minorities often result from unequal access to educational resources and differential educational attainment. Beyond individual social mobility, the United States looks to education to fulfill multiple societal goals: to transmit knowledge and literacy, socialize values and attitudes, monitor children's behavior, and prepare students for higher educational or occupational opportunities. While inequality in educational opportunity has implications for individual employment opportunities and economic well-being over the life course, these differences are also relevant for current social debates on employment, welfare reform, poverty, homelessness, and crime.

Given historical and contemporary patterns of racial and ethnic educational inequality, researchers and policymakers have voiced concerns over the equality of access to educational resources. Additionally, the civil rights and women's movements of the 1960s influenced much of the sociological research concerning equality of educational outcomes. Moreover, many researchers find that educational institutions themselves play a key role in the reproduction of racial inequality. These orientations toward research are reflected in the theoretical traditions of sociology.

## THEORETICAL FRAMEWORKS ON EDUCATIONAL INEQUALITY

The Black–White achievement gap has received significant empirical and theoretical attention, and sociologists approach the subject from very different theoretical frameworks. The major theoretical developments in sociology of education reflect the larger discipline's traditions ranging from Marxist to Weberian. Most contemporary research on race and ethnic racial inequality in education falls into three categories. The first has a *functional* or economic foundation, arguing that the education system is neutral and that the lower academic performances of racial and ethnic minorities can be attributed to lower levels of human capital or credentials. The second theoretical framework, rooted in *conflict* perspectives, argues that larger structural factors such as economic or political conditions affect various ethnic groups' achievement. Finally, the third tradition has a *cultural* origin and suggests certain groups adhere to beliefs and practices that encourage academic achievement more than others.

The functionalist tradition emphasizes that members of a society share core beliefs and values, and that education is one of many institutions necessary to create an efficient society. Functionalists incorporate an economic

model that describes education as a mechanism for individual mobility. The primary function of schooling is to teach and strengthen the skills and knowledge required to increase one's human capital and future economic capital. Under this model, racial disparities in educational attainment and achievement are a function of family backgrounds with varying levels of human capital. Factors such as language proficiency and ability are commonly used to explain the negative educational outcomes of racial minorities and immigrants. Thus, the low performance of some minority students is attributable to the disadvantaged position of their parents. While human capital measures do account for some of the inequality in achievement between White and racial/ethnic minority groups, the empirical evidence suggests there could be larger structural factors at work.

In contrast, conflict theories of education critique functional models by conceptualizing schools themselves as a hindrance to social mobility and as producers of inequality. Explanations under the broad umbrella of the conflict perspective examine structural and institutional-level factors that affect educational attainment and reproduce society's system of inequality. Conflict theories suggest that elite and nonelite individuals are often in conflict over the resources and curricula that should be made available to students. Social reproduction theories introduce the notion of power when understanding how education reinforces the social structure. Contemporary Marxists represent one school of thought within the social reproduction camp. Schools are seen as locales that reinforce the class structure through differential socialization patterns. Educational institutions are developed to serve the interest of the capitalist elite, with mass education used to socialize and control working-class children. Similarly, status conflict theorists examine individual outcomes within the framework of macro-level factors, suggesting that competition between groups over resources influences the educational outcomes of group members. In sum, under the conflict tradition, elites maintain their status by limiting the access of racial and ethnic minorities to valued educational resources.

Tracing its theoretical lineage to Max Weber's work on religious ethnic groups, cultural explanations suggest that different racial, ethnic, or immigrant groups, with varying cultural value systems, promote or discourage academic and economic success. Fordham and Ogbu (1986), for example, argued that the oppositional attitudes (or attitudes that consciously reject mainstream pro-education beliefs) many African-American students express toward school account for their low achievement. The majority of contemporary explanations about ethnic group differences in educational attainment and achievement fall somewhere in between cultural and conflict orientations.

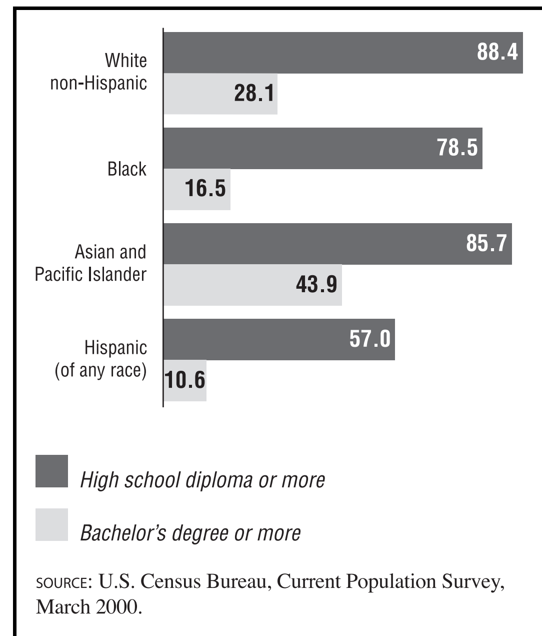


***Figure 1.*** *High school and college graduates by race and Hispanic origin, 2000. Percent of the population aged 25 and older.* CENGAGE LEARNING, GALE.

## CAUSES OF RACIAL INEQUALITY IN EDUCATION

A great deal of educational research focuses on the inequality of educational outcomes. But what are the main causes of these differences? Common thought suggests that the quality of school makes a significant difference in the academic achievement of students. At the extremes, where the average annual per-pupil expenditure can range from $20,000 at an elite independent private school to $3,000 in an inner city public school, the differences between school experiences is fairly obvious. Jonathan Kozol has termed these kinds of comparisons "savage inequalities." Beyond the extremes, however, researchers have attempted to discern the more nuanced inequalities between schools. Since the publication of the Coleman Report in 1966, which showed small improvements in academic performance for minorities in integrated schools, racial contextual effects have received ample attention in the discipline. Studies indicate that, when school is in session, Black and White children in segregated schools learn more than students in integrated schools.

Previous research shows that reading performance is more sensitive to class and ethnic differences in the features of language. Beginning readers draw heavily on their knowledge of spoken language. When spoken language skills do not match the language used in the classroom, learning to read is more difficult. A possible explanation for the relatively slow progress that students in integrated schools made in reading comprehension in

## STEREOTYPE THREAT

Despite major historical gains in academic achievement, racial and ethnic minorities still face blatant and subtle forms of discrimination in education. In the early 21st century, research in the area of social psychology examined how fear of confirming a stereotype affected the outcomes of non-White students. *Stereotype threat* occurs when individuals perceive others as having low judgments of or expectations about the abilities of members of their own race/ethnic group, regardless of whether they themselves agree with or reject these ideas. Ample evidence indicates that such stereotype threat has a negative impact on the performance of African Americans on standardized tests (Blascovich, Spencer, Quinn, & Steele, 2001). A similar pattern occurs with women's scores on math and science exams (Ben-Zeev, Fein, & Inzlicht, 2005). These stereotype threat effects occur when knowledge about widely held stereotypes result in individuals having anxiety, self-consciousness, and trouble paying attention while test taking.

In experimental settings, social psychologists find students do less well on a task if given the impression that a bad performance would confirm a negative stereotype about their gender, race, ethnic group, or social class (Spencer & Castano, 2007; Steele, 1997). Researchers are less sure, however, about the impact of stereotype threat in everyday settings. Minorities experience prejudice throughout the life course, but researchers warn about the long-term impact of these negative stereotypes, contending that the additional anxiety of stereotype threat remains a psychological challenge for stigmatized groups and may undermine the identity itself (Steele, 1997).

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winter is that students who come from segregated neighborhoods speak different dialects than their teachers. In summer, Black students who attended integrated schools gained considerably more than their peers who attended segregated schools. The seasonal patterning of reading and math test scores also emphasize that home disadvantages are compensated for in winter because when school is in session children, regardless of race or SES, perform at almost the same level (Downey, von Hippel, & Broh, 2004). Taken together, these between-school effects illuminate interesting patterns and puzzles for future research. It is important to stress, however, that these between-school effects are much smaller than the effects of home background or within-school differences.

A large literature is devoted to examining the impact of teacher quality on student outcomes. But empirical research has repeatedly found limited to no effect of teacher quality on such outcomes. Fuller (1986) found that teacher training, experience, and salary made little difference in student achievement. But more minor differences reveal how teacher behavior could still affect educational trajectories for students. Grant (1994) examined how complex but subtle processes in the classroom encourage Black girls, more than other students, to fill distinctive roles such as helper, enforcer, and go-between.

For example, the "helper role" promotes stereotypical Black female tasks that stress service and nurturance. These positions foster the growth of social skills, but they also limit the academic abilities of Black girls. Skills developed within these roles reflect the occupational roles in which Black women are overrepresented.

Even more controversial than the topic of teacher quality is the literature on the processes and structure of tracking. Curriculum tracking has a substantial and significant influence on students' future educational and occupational outcomes. Tracks, broadly defined, are the divisions that separate students for all academic subjects according to ability for particular subject areas. The vast majority of schools group and/or track students in some manner. In the United States, children in high-ability groups learn more than those in low-ability groups (Oakes, 1985). But students are often sorted by perceived performance tied to race and class stereotypes, not by actual ability. Most research finds that ability grouping (as practiced in the United States) is

neither productive nor does it reduce inequality. Research has also found that controlling for ability, minority students and those from low-income families are more likely to be assigned to a low-track class in high school than their high SES or White peers (Hallinan, 1994; Oakes, 1985).

Olsen's research (1997) indicates that tracking does benefit certain students. She found that college-bound track placement, although difficult to gain entrance to, did erase much of the racial disparities in academic achievement for Mexican and immigrant students. Thus, research has repeatedly shown that track allocation plays a key role in the educational process, especially for racial minorities. In all, school resource differences, particularly curriculum tracking, are unequally distributed by class, race, and gender; and these differences help explain educational achievement disparities.

Differences in home background, or what students bring with them into the classroom, have a powerful influence on students' academic achievement and life opportunities. Students vary on a wide array of home background measures, but socioeconomic status has consistently been the most powerful home background measure in predicting educational achievement: The higher the social class is at home, the higher the achievement level of the student. Grades, curriculum placement, college ambitions, dropout rates, and achievement levels are all related to parental SES. In the United States, race and class are strongly linked. Thus, the effects of race on educational attainment tend to operate indirectly. Most studies find that race per se does not have a direct effect, but race does influence resources, test scores, and track placement, which in turn affect attainment (Alexander & Cook, 1982).

Research also examines the role of ethnic support. Sociologists have examined the educational and occupational prosperity of Asian and Jewish immigrants, arguing that their educational and occupational successes are attributed to their skill sets and background rather than any cultural tendency. Literature on immigrants emerging in the 1990s, however, reveals how academic achievement can be fostered beyond the nuclear family and into the larger ethnic social context of the community. Zhou and Bankston (1998) found that ethnic "culture" does matter, but as a proxy for *social capital* for Vietnamese whose ties to the ethnic community and the expectations and social control that go along with membership in the greater Vietnamese community promote educational achievement, despite an economic and socially marginal environment.

Finally, sociologists caution that schools are organizations that do not operate in isolation. Researchers recognize that although local neighborhood settings for schools are often the location where students live, institutional aspects of organizational environments also shape schools. For example, Arum (2000) suggests that within the U.S. federal system, the state level (as opposed to the local level) has become increasingly important because institutional variations in laws, regulations, and court opinions are often structured at the larger level.

## CONTEMPORARY RACIAL INEQUALITY ISSUES IN EDUCATION

Trends in resegregation, battles over school funding, and access to higher education continue to be powerful influences on racial and ethnic inequality in U.S. education. But national debates often shape the local ramifications of educational policy. Two areas that have particular relevance to racial inequality in education are implications of schooling alternatives and immigrant educational needs.

Local and state education policy reflects a growing concern for educational choice, voiced in policies that followed enactment of the No Child Left Behind Act of 2001. Under this controversial school-reform act, districts must publicly identify those schools that are evaluated as needing improvement. Voucher and charter programs and homeschooling options have become increasingly popular with specific relevance to racial and ethnic minorities. Historically, public school children have been assigned to the nearest and most available school. Most states have passed or are preparing to pass legislation that increases parental school choice. Proponents argue that voucher programs encourage more choice among schools and subject districts to market forces leading to higher student achievement and equalizing educational opportunity, particularly for minorities and the poor, who can now opt out of their present failing school. Most states also allow organizations or people to form their own school, known as a charter school. Taken together, these trends have the potential to offer contemporary routes for White, wealthy, and elite flight. Critics warn that poor minority students who cannot make the commute to alternative locations seldom use vouchers or alternative schooling options. Additionally, vouchers and charter programs divert tax dollars to support high-status schools and continue to promote a two-class education system (Berliner & Biddle, 1995).

The growth in the immigrant population across the United States has prompted significant cultural, linguistic, and ethnic demographic changes. Apart from political issues surrounding growing diversity, there is increased concern over how schools should address the language obstacles immigrant children face in public schools. As of 2006, one in ten students in the United States was considered an English language learner or limited English proficient (LEP). Furthermore, the language minority population is increasing at a much faster rate than their native-born peers. LEP students continue to lag behind their classmates when it comes to academic achievement,

high school graduation, and degree attainment. While educational and linguistic communities defend the effectiveness of bilingual education and English as a second language (ESL) programs, opposition to language assistance has less to do with pedagogical interests than with social and ethnic concerns. Scholars, politicians, and educators remain divided about how to best address language proficiency for LEP students.

Overall, most social scientists find that racial and ethnic gaps in educational attainment have narrowed since the late 1970s across all levels of education, but there is less of a consensus on what factors account for the continued racial differences in educational achievement. Furthermore, much research on minority and immigrant students still considers them as liabilities to overcome and until very recently, racial comparisons have masked the cultural heterogeneity among panethnic groups. Given the increasing importance of global networking, future educators, policy makers, and those concerned with inequality should consider how the growing diversity of the United States can be an educational contribution.

**SEE ALSO** Volume 1: *Academic Achievement; College Enrollment; Cultural Capital; Human Capital; Immigration, Childhood and Adolescence; Oppositional Culture; Policy, Education; School Culture; School Readiness; School Tracking; Segregation, School; Social Capital; Socialization, Race; Socioeconomic Inequality in Education.*

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***Beth Tarasawa***

# RELIGION AND SPIRITUALITY, CHILDHOOD AND ADOLESCENCE

Parents, religious communities, and political figures have an intense interest in the transmission of religious knowledge and spiritual practices to children. Thus, they devote extensive resources to this cultural activity, from religious instruction to community festivals to youth-targeted media. In addition, virtually every religious and spiritual tradition has important rituals that signal key transitions in the life course. Some occur within days of birth, such as baptism and circumcision; others in middle childhood, such as catechism and confirmation classes; and still others in adolescence, such as bar and bat mitzvahs, Quinceañera**,** Amish rumspringa, and Native American vision quests. These rituals require extensive preparation by the youth and his or her family, require the youth to gain a basic understanding of the core tenets and practices of the religious tradition, and culminate in a celebration that frequently includes extended kin, congregations, and entire communities.

Despite the attention that diverse cultures pay to religious transmission, only recently have scholars returned to the study of religion and spirituality among children and adolescents. Researchers have documented the religious

involvement of children and teens both in the United States and abroad, explored diverse components of spirituality, and developed several conceptual models to interpret their results. Childhood and adolescent religion and spirituality has become an active field in contemporary social scientific research.

## RELIGION IN CHILDHOOD AND ADOLESCENCE

For chiefly practical reasons, scholars have more systematic knowledge about religious involvement than about spirituality and more certainty about adolescents than about children. First, religious organizations are readily identifiable, and participation in them is easy to measure. It is far simpler, for example, to record the number of times a youth enters a house of worship each week than to gauge the piety of his or her prayers. Second, adolescents are relatively easy to survey and observe: They often are clustered together in school or youth organizations, and access is not complicated; they have an adultlike ability to think and communicate; and they are often eager to cooperate with researchers. By contrast, access to children is more difficult, and children often lack the communicative and cognitive skills needed to answer questions about beliefs, meanings, and other abstract matters. Third, there is a wide readership for studies of adolescent religious and moral life, whereas audiences for works on spirituality are smaller and more segmented.

Far more than public fascination drives research into adolescent religious involvements, however. What drives this research is the enormous and significant engagement in religion by youth. The 2000 World Values Survey reported that 84% of Canadian, 93% of U.S., and 97% of Mexican youth ages 18 to 24 believe in God and that 27%, 50%, and 73%, respectively, report that their belief in God is "very important" in their lives (Roehlkepartian, King, Wagener, & Benson, 2006). The 2002–2003 National Longitudinal Survey of Youth and Religion (NLSYR) reported that 40% of U.S. teens ages 13 to 17 attend religious services at least weekly, another 19% do so at least monthly, and only 18% never attend, with 28% of those in the final category stating that they would attend if they could (Smith, 2005). The NLSYR, a nationally representative survey of more than 3,000 English- and Spanish-speaking adolescents and their parents, showed that belief and attendance are high in the United States because sizable proportions of American teens report a variety of personally meaningful religious experiences (see Table 1). Although involvement in religion declines as teens age, a solid majority (57%) report "frequent" or "occasional" attendance at worship services at the end of the first year of college, the same number report "no change" in their religious beliefs since beginning college, and 35% report "stronger" religious beliefs (Keup & Stolzenberg, 2004).

Surveys provide a useful window into adolescent religious involvement but have some limitations. Gaining a full understanding of adolescent religiosity requires direct, open-ended, and lengthy conversations; entry into and participation in youth worlds; and a close look at the media culture teens consume. Many studies of this type have added nuance and complexity to scholarly understanding of adolescent religious life. From interviews with adolescents one learns that although most U.S. teens have a benign view of religion, matters of belief and practice are distant from the everyday priorities of most adolescents. Teens seem to view religion as "a very nice thing" (Smith, 2005, p. 124) regarding it as something that is "good for you" but rarely something that generates excitement or passion (Clydesdale, 2007, p. 11). There are exceptions: An estimated 10% of U.S. teens rely on their faith to shape their lives and direct their decisions. Also, about 1% of U.S. teens are intentionally nonreligious; they consciously choose to reject religion and explore alternative worldviews. Most U.S. teens, however, regardless of their stated religious self-identification, articulate a belief system that is distinctly American: God exists, fixes personal problems, and wants people to be happy and nice.

Consequently, few U.S. adolescents demonstrate a focused interest in exploring religious life but most grant a wide berth to those who wish to do so. There also is little in U.S. adolescents'" generalized beliefs about the deity that prevents them from considering ghosts,

| Teens who ... | Percent |
|---|---|
| report "a personal commitment to live for God" | 55% |
| report "an experience of spiritual worship that was very moving and powerful" | 51% |
| have experienced "a definite answer to prayer or specific guidance from God" | 50% |
| have "witnessed or experienced what [they] believed was a miracle from God." | 46% |

SOURCE: The National Longitudinal Study of Youth & Religion, 2002–2003.

***Table 1.*** *U.S. adolescents report religion is personally meaningful.* CENGAGE LEARNING, GALE.

astrology, extraterrestrials, and reincarnation as possibly real, as many of them do. That openness is facilitated by media such as music, movies, television, and the Internet. In fact, intentional teen exploration of paranormal phenomena, although rare, can be attributed to its labeling as dangerous by mainstream religious groups (Clark, 2003). Some of these teens find the earthy, feminine, and nascent character of Wicca practice an appealing alternate to traditional religious forms (Berger & Ezzy, 2007). However, despite increasing U.S. religious diversity, it is likely that adolescent religious exploration will be of Christianity rather than of any other religious form. Proximity and population prevalence explain that reality.

One of the liveliest areas in the study of adolescent religion involves the sizable, significant, and positive association that teen religiosity has with positive life outcomes such as reduced risk taking, better educational performance, and greater self-confidence. Researchers in psychology, sociology, public health, and economics have investigated this association and concurred that it is both robust and consistent. Scholars have learned that religious adolescents are more likely to stay in school, get better grades, and complete their degrees compared with less religious and especially nonreligious adolescents. They also have learned that religiously devout adolescents have lower rates of risky behaviors, from smoking to alcohol use to sexual promiscuity, than their less religious and nonreligious peers. In addition, they have learned that religiously committed teens are more satisfied with their physical appearance, their relationships with family and friends, and their ability to talk to adults and find support among them (Regnerus, 2003, 2007; Smith, 2005). The explanation for this positive association between religiosity and life outcomes is the subject of considerable debate, but its existence is not disputed.

Scholars know less about religion among children under age 13, and what they do know largely comes through intermediaries. For example, the *Religion* & *Ethics NewsWeekly* sponsored a "Faith and Family in America" poll in 2005 that surveyed a national sample of U.S. households with children. A solid majority of household heads (62%) reported that religion was "very important" to their families, and an even larger majority (74%) indicated that it was "very" or "somewhat" likely that their children would choose as adults to remain in the faith tradition in which they were raised.

This fits with the little that is known from direct surveys of children. In 1989, the Girls Scouts, the Lilly Endowment, and the Harvard psychiatrist Robert Coles joined forces to sponsor a national survey of U.S. schoolchildren as young as 9 years old. One-half of that survey's elementary school age respondents reported that their religion was "very important" to them, another fifth reported that religion was "fairly important," and more than three-quarters affirmed belief in God. Moreover, one-third of elementary school age respondents reported a personal religious experience that "changed the direction" of their lives and one-fifth claimed that "a close relationship to God" was their "most important" goal for the future. Children thus largely follow in their parents' footsteps in religious belief and practice. Although that may be their only option, a sizable minority also chooses to embrace that faith and claim it as their own. Both surveys, as well as the NLSYR, are available from the Association of Religion Data Archives (2008; www.thearda.com).

## SPIRITUALITY IN CHILDHOOD AND ADOLESCENCE

Perhaps it was the prominence of Harvard's Robert Coles and his 1990 book, *The Spiritual Life of Children,* that made spirituality a safe topic for lesser known scholars. Perhaps it was popular campus lecturer Jonathan Kozol's (1995) bestseller about the spiritual lives of Harlem children, *Amazing Grace: The Lives of Children and the Conscience of a Nation,* published five years later, that piqued academics' attention. Perhaps it was the example of Princeton sociologist Robert Wuthnow, *After Heaven: Spirituality in America since the 1950s* (1998), which not only demonstrated how to study spirituality at the macro level but also outlined a half-century of its history in U.S. culture. Or perhaps it was the influence of an assortment of private and federal funding agencies, such as the Templeton Foundation, the Lilly Endowment, and the National Institutes of Health, whose priorities turned to underwriting spirituality research. Whatever the cause, there is no denying the broad and multidisciplinary nature of scholarly interest in spirituality since 2000.

A major area of attention has been defining spirituality and clarifying its relationship to religion. For historians, sociologists, and anthropologists, spirituality generally is defined as "the beliefs and activities by which individuals attempt to relate their lives to God or to [the sacred]" (Wuthnow, 1998, p. viii); this may or may not overlap with individuals' participation in religious organizations or engagement with religious culture. From this broader perspective spirituality and religion are like circles on a Venn diagram that variously overlap across subjects and over time. Other scholars, however, subsume one within the other, with some scholars defining spirituality within the bounds of religion whereas still others define religion as a type of spirituality and spirituality as a dimension of personality. Childhood and adolescence thus present an important place to test these theories. By examining how spirituality and religiosity develop in children and teens, scholars can refine their definitions and draw implications for religious education, human development, and larger understandings of cultural patterns and change.

## CRITICISM AND METHODOLOGICAL DIFFICULTIES

Social scientific research on spirituality is not always well received. Many scholars report that their work is marginalized in their disciplines or that there is outright hostility to it. Some critics question their findings, whereas others are hostile because they hold that religion and spirituality are dying superstitions that have no place in social scientific research. Moreover, the limited sample sizes of most studies of child spirituality and the overwhelming variety of potential spiritual forms make it difficult to draw simple generalizations from this research. There is evidence that this is beginning to change with the publication of three edited volumes (Ratcliff, 2004; Roehlkepartain et al., 2006; Yust, Johnson, Sasso, & Roehlkepartain, 2006) and the emerging scholarly community that these studies represent.

Research on adolescent spirituality is a bit more accepted, as national studies of it in the United States, Australia, and other developed countries have given scholars much to compare (Mason, Singleton, & Webber, 2007). This research, however, has numerous methodological hurdles. In the United States, for example, scholars have documented how many American baby boomers have set out to explore spiritual life (Roof,1993; Wuthnow, 1998), but few contemporary U.S. adolescents find the term *spirituality* meaningful or describe themselves as spiritual but not religious (Clydesdale, 2007; Smith, 2005). This does not mean that U.S. teens reject or lack a spiritual dimension, only that the term is vague and better ways of researching spirituality need to be devised. Thus, issues of measurement and generalizability will remain at the forefront of this field.

## THEORIES AND DEBATES

Beyond the definitional and philosophical debates that surround this field of inquiry, including challenges to the validity of religion and spirituality, there have been a number of scholarly debates. One involves stage theories of spiritual and/or religious development, including arguments among competing stage theorists and between stage and nonstage theorists. Several debates are methodological. One exists between those who give primacy to quantitative methods and those who privilege qualitative research. Another exists between those who view religion as epiphenomenal (i.e., as something that can be explained by other factors, such as social class) and those who view it as a social fact, with the former attempting to demonstrate that religious findings are spurious (i.e., due to chance) and the latter seeking to show that they are nonspurious (i.e., ''real''). This debate is most intense over interpretations of the positive association of religious involvement and life outcomes, with one side arguing that this association is a function of self-selection and social location and the other side arguing that religious involvement provides a variety of resources that directly and indirectly contribute to more positive life outcomes.

Because the study of religion and spirituality is multidisciplinary, larger disciplinary differences also shape debates. Psychologists and many economists privilege the individual in their models of human behavior, whereas historians, sociologists, and anthropologists hold that the whole is greater than the sum of its parts and thus prioritize cultural and social factors. Such differences will persist as long as these disciplines exist. Also, no understanding of religion or spirituality research is complete without acknowledging the wide gap between secularization and religious market paradigms: those who hold that modernization necessarily leads to secularization of religion versus those who hold that modernization creates free religious markets in which religion expands and thrives. The impact of the secularization debate cannot be underestimated—those who concur with secularization models point to lower levels of religiosity among adolescents as signaling secularization, whereas those who concur with religious market models point to persistent youth involvement in religion combined with the return to religion or spiritual exploration later in the life cycle as evidence of vital religious markets.

## MOVING FORWARD

Many of the above debates are intractable, and no additional evidence will convince partisans one way or the other. Important scholarly gains need to be made, however, in four areas: measurement, method, comparison, and interdisciplinarity. First, a greater variety of measures need to be tested, contrasted, and refined. Also, measures need to go beyond counting (e.g., ''How often do you pray?'') to matters of content (e.g., ''Describe your last prayer''), rationale (e.g., ''What outcomes do you seek when you pray?''), and respondent capabilities (e.g., age-gauged questions about prayer). Second, researchers need to diversify their methods. Augmenting a primary method is not expensive—a week spent gathering qualitative data or designing a concise Web survey are well within the resources of most researchers—and such will move scholarship past dead-end methodological debates to more substantive matters.

Third, comparative research is a pressing and widely acknowledged need. Although increasing U.S. religious diversity is attracting scholarly attention to non-Christian religious and spiritual forms, too few non-U.S. scholars or sites are engaged in this issue. Finally, researchers new to the study of religion and spirituality, as well as those long involved, need to do their interdisciplinary ''homework.'' There is much extant scholarship of high quality, and the depth and breadth of religious and spiritual phenomena leaves no room for disciplinary parochialism.

Psychologists need to read beyond psychology of religion, sociologists need to develop a taste for economic scholarship on religion (e.g., Iannaccone, 1998), and so on.

To move forward in scholarly understandings of the religious involvements and spirituality of children and adolescents will require better data, more diverse data, and wider engagement. Although a great deal of good work exists already, much remains to be done.

**SEE ALSO** Volume 1: *Activity Participation, Childhood and Adolescence; Civic Engagement, Childhood and Adolescence; Home Schooling.*

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***Tim Clydesdale***

# RESIDENTIAL MOBILITY, YOUTH

*Residential mobility* is a form of migration that is typically thought of and analyzed as occurring within a particular country. Along with changes in the local environment that occur around children without their movement (e.g., gentrification, urban redevelopment), residential mobility is one of two ways that children's local environments can vary over the course of childhood. This variation can occur either within or across counties and states. It typically involves other family members but can occur independently of family as well. Although migration can and often does occur to or from other countries, in-depth studies of residential mobility usually have a national, rather than international, focus. The reasons for this definition are driven primarily by the availability of data: Because the goal of many studies is to understand not just how common movement is, but what changes accompany that movement, researchers often want to link children to data on specific characteristics of each residence. This level of detail is often only possible within one country.

Why is residential mobility an important part of the early life course? As the following discussion will demonstrate, geographic movement among the young population is very common and often coincides with important changes in family composition and organization, the quality of the local environment, the nature of peer groups, and educational quality. Understanding the causes and consequences of residential mobility in children's lives, as well as trends over time, is therefore an important task.

## PATTERNS OF RESIDENTIAL MOBILITY AMONG CHILDREN AND ADOLESCENTS

Residential mobility has declined slightly over time but remains a common feature of many societies. In 1948, when the United States Census Bureau began collecting information on geographic mobility, about 20% of the U.S. population moved in a 1-year period. In 2003 that number stood at about 14% (Schachter, 2004). Although

overall rates of movement have decreased over time, the distance of moves has increased, with more moves now crossing state boundaries (Schachter, 2004). Families with children are less likely to move than families without children (Long, 1972). Moving rates are higher among children than adults, however: In 2003, for example, 21.4% of children ages 1 to 4 experienced a move, versus 8.6% of adults ages 45 to 54 (Schachter, 2004). Movement among children is also common in other countries, although less so than in the United States (Long, 1992).

## THE SOCIAL DETERMINANTS OF YOUTHS' RESIDENTIAL MOBILITY

Despite the frequency of mobility, there are important differences in which children are most likely to move, both within the United States and in other societies. First, there are noticeable age differences in who moves. Rates of movement are higher among very young children and young adults than among older children and adolescents. Between 2002 and 2003, for example, more than 20% of children ages 1 to 4 and almost one-third of young adults ages 20 to 29 experienced a move, versus 16% and 14% of those ages 5 to 9 and 10 to 19, respectively (Schachter, 2004). These age differences are particularly pronounced in the United States. Rates of movement during the early life course, in both early childhood and young adulthood, are much higher in the United States than in other industrialized nations (Long, 1992).

Many social factors determine the likelihood of movement among children, and also partially explain age differences in children's rates of movement. With respect to the greater tendency of very young children to move, it is important to think about their parents' stage in the life course. Childbearing may change the characteristics that make a particular residence desirable, causing parents to place a higher priority in finding a neighborhood with low crime rates, a good educational system, and spacious housing (Long, 1992; Rossi, 1955). High rates of movement among those transitioning out of childhood—young adults ages 20 to 29—also make sense, because these are the ages at which important changes in the life course occur, including the completion of higher education, employment transitions, and the formation of new families.

In addition to life course transitions among young adults and young parents that explain the higher mobility of the oldest and youngest children, a number of other factors determine the likelihood of geographic movement during childhood. Children who live below the national poverty line are more likely to move than their wealthier peers, as are children whose parents are not married. For both groups of children, reduced economic status and access to the resources necessary to live in certain locations are a source of instability. Children of divorced parents are also more likely to spend time at the residences of multiple family members over the course of childhood, increasing rates of mobility. Poverty and family structure may also influence children's likelihood of movement in combination with one another: Children who live with only one parent are more likely to experience poverty than children in two-parent homes, making their living situation even more economically unstable (South & Crowder, 1998). Particularly high rates of poverty and divorce in the United States, and the economic and occupational instability that accompany them, may also explain higher rates of movement among children in the United States than in other countries.

The type and scale of a child's move are equally important to rates of residential mobility. Although there are not striking differences in rates of movement among Black, Latino, and non-Latino White children, there are large differences in the types of moves that children experience by race/ethnicity. Black children in particular, and Latino children to a lesser degree, are more likely to move from one poor neighborhood to another, whereas non-Latino White children are more likely to transition to wealthier environments (Quillian, 2003; Timberlake, 2007). With respect to the scale of a move, parents' education plays an important role. Children with highly educated parents are not much more likely to move than other children. Among children who do move, however, the distance of the move is greater (Schachter, 2004).

Many factors—including the stage in children's and parents' life course, families' economic well-being, family organization, and parental education—work independently and in combination with one another to determine whether and how far a child will move. These causes also contribute to different patterns of residential mobility across societies. Although the factors discussed are known to be particularly salient in shaping mobility trends, there are other important contributors as well, including urban versus rural residence and housing tenure (Rossi, 1955).

## THE CONSEQUENCES OF RESIDENTIAL MOBILITY FOR CHILDREN

Children can be influenced by residential mobility in both positive and negative ways, which are not yet fully understood by researchers. A change in a child's local environment can be thought of as involving two parts: a move (regardless of its direction) and a change in the quality of neighborhood conditions. With respect to a move, residential mobility may adversely influence children, whether or not it involves an improvement in surroundings. Some researchers, for example, define the number of times a child's household moved while growing up as an indicator

of family stress, and find that this measure is associated with a lower likelihood of high school completion (Haveman, Wolfe, & Spaulding, 1991).

This way of thinking about children's residential mobility assumes that all moves, whether they involve an upward or downward shift in the quality of surroundings, influence children equally. This may not be the case, however, and relates to the second component of a move: the extent to which it involves a change in the quality of a child's environment. Because children consistently exposed to disadvantage may be subject to more adverse influences than those who only briefly experience poor and unsafe surroundings, residential mobility out of a disadvantaged neighborhood may benefit children if it brings access to better housing, more positive peer role models, and a better educational system (Goering & Feins, 2003). This positive change may outweigh the disruptive influence of moving. On the other hand, if children move frequently between similarly poor or wealthy neighborhoods, then the combination of frequent disruption due to mobility and consistent exposure to disadvantage may be harmful to children. Researchers are trying to understand the extent to which children's exposure to disadvantage varies over time due to residential mobility, with the hope of disentangling the potentially different influences of residential mobility and exposure to disadvantaged environments (Jackson & Mare, 2007; Timberlake, 2007).

### IMPLICATIONS AND FUTURE RESEARCH

Much is known about patterns of children's residential mobility in the United States and in other societies. Very young children and young adults are the most likely to experience mobility, and mobility among children of all ages is much higher in the United States than in other industrialized nations. The determinants of residential mobility are also well understood, with clear differences in which children move by families' economic status, marital status, education, and stage in the life course.

Our understanding of the consequences of residential mobility for children's well-being is less developed. Although residential mobility appears to be a meaningful predictor of children's success and well-being, it is not clear if this applies equally to all types of moves. Research in this area is necessary and important in order to gain a thorough understanding of how children's welfare changes over time as they move.

**SEE ALSO** Volume 1: *Neighborhood Context, Childhood and Adolescence; Family and Household Structure, Childhood and Adolescence;* Volume 2: *Residential Mobility, Adulthood;* Volume 3: *Residential Mobility, Later Life.*

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***Margot I. Jackson***

## RESILIENCE, CHILDHOOD AND ADOLESCENCE

Resilience research is guided by the following question: Why do some children experience significant adversity but grow up to be well-adjusted adolescents and adults? Some children are exposed to conditions such as war, poverty, or abuse but are able to overcome these adversities and become healthy, productive members of society, whereas other children exposed to the same circumstances develop mental health problems. Those who achieve positive developmental outcomes in the context of significant risk or adversity are considered to be resilient.

### RESILIENCE CONCEPTS

The study of resilience involves three critical components: risk factors, protective factors, and positive adaptation. A risk factor is a condition, context, experience, adversity, or individual characteristic exposure to which has been shown to increase the probability that an

individual will experience maladjustment. Researchers have identified risk factors for child maladjustment at the individual, family, and community levels. Individual-level risk factors include factors such as depressogenic cognitive style and negative temperament. Family risk factors include factors such as parental divorce, parental mental illness, and substance use. Community-level risk factors include factors such as neighborhood violence, high neighborhood poverty, and the presence of multiple outlets for selling alcohol to minors.

Risk factors tend to be positively intercorrelated so that children exposed to one risk factor are likely to be exposed to others as well. Risk factors negatively impact child development by disrupting the satisfaction of basic needs and goals or impeding the child's accomplishment of developmental tasks, such as adjusting to school and developing friendships. In general, the more risk factors a child experiences, the greater the chances he or she will develop adjustment problems. For example, using a large sample of members of a health maintenance organization (HMO), Vincent Felitti and colleagues (1998) found that exposure to four or more risk factors in childhood predicted a 4- to 12-fold increase in the odds of developing problems in adulthood, including alcoholism, drug abuse, depression, and suicide attempts. Thus, it is the cumulative effect of exposure to multiple risk factors that makes children most vulnerable.

A protective factor is an individual-, family-, or community-level factor that decreases the likelihood that an individual exposed to significant risk will develop problems or increases the chances he or she will experience positive adaptation. Protective factors facilitate positive adaptation by either promoting children's competencies or by reducing the child's exposure to adversity. Like risk factors, protective factors have been found across levels (e.g., individual-level factors such as high child intelligence; family-level factors such as positive parenting; and community-level factors such as availability of positive mentors). It is important to note that a protective factor is not something that simply produces good outcomes in general but, instead, reduces the effects of a risk factor.

Positive adaptation can be conceptualized as the occurrence of developmental outcomes that are substantially better than would be expected given a child's exposure to specific risk factor(s). For example, children who attend underperforming schools in poverty-stricken neighborhoods are at risk for low academic achievement and behavior problems. Students experiencing positive adaptation in this circumstance would be those demonstrating high academic achievement and prosocial behavior. These students would be considered resilient.

Although resilience research is similar to several other approaches to studying child and adolescent development, such as risk research and the study of child competence, there are important differences as well. Whereas risk research has focused on predicting negative outcomes and the study of competence has focused on positive outcomes, resilience research considers both negative and positive outcomes, as well as the protective factors that account for positive adaptation in the context of risk. Resilience researchers also seek to understand the dynamic processes that explain the processes by which an individual achieves positive outcomes despite being exposed to adversity; including emotional and cognitive mechanisms, gene-environment interactions, and neuroendocrine responses.

## HISTORY AND EVOLUTION OF THE RESILIENCE FIELD

The systematic study of resilience began to evolve in the early 1970s as a handful of pioneering researchers identified subgroups of children at risk for psychopathology who were characterized by surprisingly high levels of competence. Whereas most scientists of the time disregarded positive outcomes among high-risk children as unimportant anomalies, researchers such as Norman Garmezy and Michael Rutter described and sought to understand the reasons for these phenomena. For example, Garmezy (1974) observed that most children identified during childhood as at risk for schizophrenia did not ultimately develop mental disorder in adulthood. He laid out a four-stage strategy for studying the development of severe psychopathology that included (a) examining early forms of competence and incompetence; (b) identifying variables that differentiate low- and high-risk children; (c) conducting longitudinal studies to predict patterns of outcomes among vulnerable children; and (d) testing interventions to evaluate whether changing early predictive variables influences later competence.

Around the same time, Rutter (1979) described the cumulative risk phenomenon, in which a child's susceptibility for later disorder increases exponentially as a function of the number of stressors experienced. Using an epidemiological sample of children living in inner-city London, Rutter compared groups of children based on the number of family stressors (e.g., marital conflict, low socioeconomic status [SES], paternal criminality, or maternal psychiatric disorder) they faced. He discovered that children exposed to one stressor were no more likely to have a psychiatric disorder than those who had zero stressors, whereas children with two stressors were 4 times as likely, and those with four or more stressors were nearly 20 times as likely, to have a disorder than children who had only one or no stressors. However, Rutter pointed out that a sizable minority of children who suffered a combination of stressors did not have a mental disorder. He also identified a variety of potential protective factors that were suggested by prior

research (e.g., female gender, high-quality education, high levels of parental supervision, and good parent-child relationships).

In the 1980s groundbreaking studies by Rutter and Garmezy, among others, led to new conceptualizations of major constructs, methods, and data-analytic strategies for examining resilience processes and outcomes. In addition, Emmy Werner and Ruth Smith published *Vulnerable but Invincible* (1982), a book describing a longitudinal study that would become a landmark in the resilience field. Over multiple decades, these researchers followed a population of infants born in 1955 on the island of Kauai, Hawaii. They discovered that children with a combination of risk factors including chronic family poverty, poorly educated parents, and perinatal stress (e.g., premature birth) tended to develop learning and behavioral problems in childhood and adolescence. Werner and Smith identified a variety of protective factors, such as early sociability, family cohesiveness, and social support from extended family and friends, that differentiated high-risk, resilient children from those who later developed problems.

The 1990s witnessed an explosion of studies using the concepts and methodologies initiated by these early resilience pioneers. As the field has evolved, researchers have increasingly clarified concepts and terminology, expanded the types of risk and protective factors and processes examined, and recognized that resilience may not be stable across development or different domains of adjustment. In the next section, this entry reviews some of the main protective factors that have been identified by resilience researchers studying children at risk for mental health problems.

## PROTECTION IN THE CONTEXT OF RISK

Resilience researchers have identified a variety of factors across multiple domains that buffer children against the negative effects of adverse circumstances.

**Family Protective Factors** Protective factors within the family have received the most attention in resilience research, because the family is the most proximal and stable of children's contexts. Early resilience research suggested that having a close relationship with at least one parent was protective across various adverse situations (Garmezy, 1974; Rutter, 1979; Werner & Smith, 1982). Subsequent research has shown that the protective effects of the parent-child relationship occur at different developmental stages. For high-risk infants, having a secure attachment with one caregiver is a protective factor for many outcomes throughout the life span (Sroufe, 2002). In childhood and adolescence, warm, close relationships with mothers or fathers protect children against the negative effects of poverty, parental mental illness, and parental alcoholism (Luthar, 2006). In adolescence, higher levels of parental monitoring also have been shown to protect against the negative effects of risky peer and community contexts (Dishion & McMahon, 1998).

**Community-based Organizational Protective Factors** Children living in impoverished neighborhoods often face multiple adversities, with each adversity increasing the likelihood of exposure to other adversities. For example, living in poverty increases the likelihood of parental mental health problems and exposure to antisocial peers and community violence. The cumulative exposure to multiple adversities puts children at risk for mental health problems. However, positive experiences in child care, schools, and community contexts can be protective in these environments. For example, in low-income neighborhoods, infants and toddlers in high-quality child care (i.e., those with highly educated and trained child care providers, low child-to-adult ratios, and low staff turnover) tend to be more securely attached to their mothers and less likely to be delinquent later in life (NICHD Early Child Care Network, 2002). For older children, having a warm and trusting relationship with an adult in the community, such as a teacher, coach, or mentor, can lead to positive outcomes in high-risk environments.

**Individual Characteristics** Individual characteristics of the child have also been the focus of resilience research; but this research typically involves community and family factors as well, because these contexts are instrumental in shaping children's characteristics. One of the most widely studied child characteristics is high intelligence, which has been shown to protect children from negative outcomes and lead to positive outcomes across a variety of adverse circumstances, even after controlling for the association between intelligence and family SES (Masten, 2001). In infancy and toddlerhood, having an easy child temperament or being able to appropriately regulate emotions has been shown to exert protective effects, whereas having a difficult temperament is a risk factor for negative outcomes under stressful conditions (Calkins & Fox, 2002). In childhood and adolescence, active coping strategies, coping efficacy, high self-esteem, internal locus of control, and positive thinking have been found to protect children against the negative effects of adversity (Sandler, Wolchik, Davis, Haine, & Ayers, 2003).

**Friendships** The quality of peer relationships and social networks are also an important context in which resilience research has been productive. Being accepted by peers and having a supportive relationship with at least

one friend protects children from the negative effects of adversity. At the same time, peer rejection and association with deviant peers increase adolescents' vulnerability to behavior problems in high-risk environments. Research has also shown that association with deviant peers is protective against depression among antisocial adolescents living in inner cities (Seidman & Pedersen, 2003). This finding suggests that while having deviant friends may contribute to increased behavior problems, having friends (even if they are deviant) may lead to less depression. This is an example of the complexity involved in identifying risk and protective factors in resilience research because one factor (e.g., association with deviant peers) may be both risky and protective depending on the outcome of interest.

## IMPLICATIONS OF RESILIENCE RESEARCH

Resilience researchers have amassed a wealth of knowledge about factors that promote healthy adjustment among children at risk. Prior to the 1970s, researchers had little knowledge of positive influences on children's development in the context of risk; consequently, they lacked information needed to develop interventions to prevent adjustment problems among high-risk children (Rutter, 1979). Since the late 1970s, findings from the resilience literature have provided the impetus for the development and evaluation of a wide range of interventions that build protective factors. Preventive interventions have been developed to counteract the negative effects of risk factors such as neighborhood disadvantage, family poverty, low SES, premature birth, parental divorce, death of a parent, abuse, and trauma. The following sections provide examples of interventions that have been designed to build protective factors to counteract one of these risk factors: parental divorce.

**Parental Divorce** Each year, more than 1 million children experience parental divorce in the United States. Although the majority of children whose parents divorce do not develop serious problems, these children are at increased risk for a host of difficulties, such as conduct problems, academic underachievement, and increased rates of mental health and substance abuse disorders in adulthood. Several interventions have been shown to reduce children's risk of experiencing significant difficulties following parental divorce by bolstering known protective factors.

**Family Programs** Two parenting-based preventive interventions have been shown to help children adjust to parental divorce: Parenting Through Change (PTC) and the New Beginnings Program (NBP). Both programs build protective factors by teaching parents effective disciplinary practices and promoting warm parent-child relationships. Randomized experimental evaluations of these interventions have shown that children whose parents participated in PTC or NBP had fewer conduct problems several years later compared to children in control groups (Martinez & Forgatch, 2001; Wolchik, Sandler, Weiss & Winslow, 2007). In fact, positive effects of the NBP have been found on a wide range of adolescent outcomes 6 years after the intervention, including lower rates of diagnosed mental disorder, fewer mental health problems, lower substance use, fewer high-risk sexual behaviors, higher self-esteem and higher grade point averages. The protective effects of NBP were most pronounced for children who were at the highest risk for problems when the intervention began, which is consistent with research showing that children exposed to multiple risk factors are the most vulnerable and, consequently, most in need of interventions to build protective factors.

**Child Programs** Two preventive interventions have been shown to promote resilience among children experiencing parental divorce by promoting individual protective characteristics, specifically child coping skills. The Children's Support Group (CSG) and Children of Divorce Intervention Project (CODIP) are group-based programs designed to give children emotional support, correct misconceptions about divorce, and teach coping skills (e.g., emotional expression, problem-solving skills, and anger management) to help them adjust well to parental divorce. Evaluations of both programs have shown increases in child competence and reductions in internalizing (e.g., depressive symptoms) and externalizing (e.g., noncompliance) problems 1 to 2 years following intervention compared to no-treatment control groups (Stolberg & Mahler, 1994; Pedro-Carroll, Sutton, & Wyman, 1999).

## FUTURE RESEARCH

The field of resilience has made important contributions to understanding child development within the context of adversity and has laid the groundwork for interventions that can improve child well-being by building protective processes identified through resilience research. In the years ahead, it is expected that scientists will continue to expand the search for protective factors by increasingly attending to genetic and biological factors in addition to psychological mechanisms, as well as examining protective factors that may be specific to ethnic and cultural subgroups (e.g., ethnic pride or collectivist family values). Finally, findings from resilience research will continue to be used to develop theory-based intervention strategies for improving the lives of children at risk.

**SEE ALSO** Volume 1: *Child Abuse; Family and Household Structure, Childhood and Adolescence; Friendship, Childhood and Adolescence; Neighborhood Context, Childhood and Adolescence; Parent-Child Relationships, Childhood and Adolescence; Peer Groups and Crowds; Poverty, Childhood and Adolescence.*

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# S

## SCHOOL CULTURE

Efforts to improve the academic performance of schools typically focus on their formal, structural characteristics, such as curricular offerings and test scores. Yet, social and behavioral research has amassed a good deal of evidence that the more informal, social characteristics of a school—for example, the general quality of relationships among students or between students and teachers—also contribute to its students' academic performance and healthy development. The *culture* of a school matters. School culture is an important topic to consider when studying the life course because it captures how various life course trajectories (e.g., social development and educational attainment) intersect within specific contexts in one stage of life in ways that influence transitions into and through subsequent stages of life.

### DEFINING AND STUDYING SCHOOL CULTURE

Culture is an esoteric concept that is not easily defined. A general definition is the established patterns of activity, symbolic structures, and products within a given society. Culture can also exist on the level of the group or organization, such as the school (Coleman, 1961). A school's established patterns of activity can include rituals that are officially organized (e.g., participation in sponsored clubs or the clustering of students by grade or achievement level) and those that arise organically from repeated interactions among students and teachers (e.g., dating rules, sharing a common vocabulary). Its symbolic structures refer to taken-for-granted norms about how students and teachers are supposed to act, what they are supposed to value, and what kinds of emotions are acceptably felt and displayed. For example, drinking alcohol may gain students high social status in one school but low social status in another. Cultural products of the school can be tangible commodities, such as a winning sports team, or they can be more intangible, such as the perceived quality of the young people it is producing. Importantly, a school culture is tapped into broader cultures (e.g., American society) and subsumes different subcultures (e.g., jocks vs. nerds, White vs. Black, young vs. old). Yet, over time, an overarching culture typically arises in the school that is a system of rules, values, and beliefs that creates opportunities for behavior, interpersonal interaction, self- and other-assessments, and social advancement, whether individuals are conscious that this is happening or not (Carter, 2007; McFarland & Pals, 2005; Pianta & Walsh, 1996).

Not surprisingly, then, social scientists have long been interested in school culture. Some school culture researchers conduct in-depth ethnographies of a single school or a small number of schools. Sara Lawrence-Lightfoot (1983) illustrated this approach in *The Good High School*, which focused on six very different high schools widely considered to be successful within their own contexts—for example, an inner-city public school with a higher than expected graduation rate and an elite private school that is a pipeline to Ivy League colleges. Lawrence-Lightfoot constructed a portrait of a good high school based on the cultural commonalities across these schools, such as mutual respect between principals and staff and a general sense of community among students, parents, and school personnel.

Other school culture researchers rely on survey data. For example, Laurence Steinberg, B. Bradford Brown,

and Sanford Dornbusch (1996) worked together to survey thousands of students in California and Wisconsin, which allowed them to map out common peer crowds such as the *preps*, *rebels*, and *burnouts*. As another example, the National Education Longitudinal Study is collected and made publicly available by the Department of Education, whereas the National Longitudinal Study of Adolescent Health is made publicly available by the National Institutes of Health. The former study sampled parents, students, counselors, teachers, and principals in thousands of schools across the United States. These data allow researchers to compare how values and expectations of different actors in the school intersect (e.g., commonly shared goals, alienation between young and old) in ways that contribute to student performance (Lee & Smith, 2001). The latter provides a census of 132 schools in the United States. Aggregating student responses to identify prevailing norms in a given school has revealed, for instance, that adolescents avoid risky behavior when they attend schools in which students, on average, are close to their teachers, regardless of their own feelings about teachers (Crosnoe & Needham, 2004).

The ethnographic approach can elucidate important cultural patterns in any one school, and the survey approach facilitates comparisons across diverse schools. Thus, these approaches to studying school culture provide maximum value when partnered.

## THREE MAIN AREAS OF SCHOOL CULTURE RESEARCH

Contemporary scientific inquiry into school culture is largely traceable to the enormously influential, occasionally polarizing work of the late sociologist James Coleman (1926–1995). First, Coleman's 1961 book, *The Adolescent Society*, was based on an intensive study of Midwestern high schools. It argued that American high schools house peer cultures that are in direct opposition to conventional society and often undermine the basic goals of school administrators and parents. This idea of a monolithic, defiant teen culture has been largely refuted over the years, but the basic premise that schools are *the* site of youth culture is still an underlying theme of school research.

Schools can be broken down into clearly defined peer groups that share common social and academic positions in the school. For example, those referred to as *geeks* tend to develop a social identity through their repeated interactions in high-level coursework year after year, whereas those generally considered *popular* come together in clubs and teams. In both cases, proximity and shared status create meaningful peer groups (Field et al., 2005). Within a school, disparate groups then aggregate into a larger peer culture, with more powerful actors better able to define the rules of school social life. *School Talk*, in which Donna Eder, Catherine Evans, and Stephen Parker (1995) detail the hypersexualized nature of middle school, offers a startling glimpse into the power struggles that set the tone of school peer culture. They describe how coaches' denigration of signs of femininity in their athletes eventually infected the entire school culture, primarily because those athletes had such power and status among their peers. Boys who could not live up to this masculine ideal and girls who resisted their subjugated place paid a price in mental health, popularity, and attachment to school and school personnel. In this school, the peer culture of the school was toxic, even if the more formal, structural components of the school were of high quality.

Second, Coleman's 1966 study *Equality of Educational Opportunity*, also known simply as the Coleman Report, was a landmark federal report on inequalities among American schools. Controversially, it concluded that family, community, and school culture—not school funding—were often deciding factors in racial and economic differences in academic achievement. The Coleman Report had many methodological flaws and some regrettable policy applications (e.g., busing and the consequent White flight phenomenon), but its essential message that reforming schools requires transforming values and attitudes, not just pumping in money, has lived on.

This message that efforts to improve schools must start with positive changes to school culture has fueled interest in *caring* schools. In such a school, teachers realize that effectively instructing students in a given curriculum first requires that they and their students see each other as worthy of support, attention, and acceptance (Noddings, 2002). Angela Valenzuela's 1999 book, *Subtractive Schooling*, reveals the pitfalls of school cultures that lack widespread caring. In a Texas high school, the staff had a general tendency to view the cultural heritage of the largely Mexican immigrant student body as a disadvantage rather than a resource, which created an emotional disconnect in the classroom that hampered the ability of even well-trained teachers to motivate their students. Racially divided schools such as this one clearly demonstrate the politics of caring. For example, research has revealed how minority students emphasize modes of talk, dress, and interaction that symbolize their racial heritage, which school personnel then take as evidence that these students do not care about academics—setting in motion a self-fulfilling cycle that can eventually disengage students of color from school (Carter, 2007; Tyson, Darity, & Castellino, 2005).

Fortunately, social scientists have begun to identify ways to build school cultures that are more caring. One strategy, complex instruction, purposely creates student work partnerships across racial lines (Cohen, 1994). These partnerships allow students and their teachers to observe the unique contributions that people from different backgrounds can make to a group, which alters cross-group expectations and feelings of connectedness that can then build into more positive school cultures.

Third, the later years of Coleman's career were spent developing the theoretical concept of social capital, which refers to the different aspects of social connections that serve as resources for school success. It is akin to financial capital, only the currency is not money but something more personal. What do students need to get ahead academically and how can they get it at school? These questions are major foci of school culture research.

High expectations are one resource. Because students often rise to meet the expectations of parents, teachers, and peers who challenge them (Weinstein, 2002), those attending schools in which performance standards for all students are high are immersed in social capital. Another resource is information. Even smart, motivated students get off-track if they do not have practical knowledge about the schooling process. For example, Ricardo Stanton-Salazar (2001) has documented how some bright, goal-oriented Mexican-origin students do not make their way to college because they do not know about college coursework requirements or when to take their Scholastic Aptitude Test (SAT). Thus, a school in which a student has a high probability of tapping into information channels—through contacts with teachers, savvy peers, or the parents of peers—is high in social capital. A third resource is instrumental assistance. A school has social capital, therefore, when it can make available numerous people in the larger school community who are willing and able to help its students with schoolwork, projects, and applications (Morgan & Sorenson, 1999).

For all three resources, the school is an opportunity structure for social contacts and interactions that provide some tangible benefit for academic endeavors. Not surprisingly, socioeconomically advantaged schools are more likely than other schools to provide social capital, which is precisely why socioeconomic integration plans are gaining political momentum (Kahlenberg, 2001). Yet, even socioeconomically disadvantaged schools can develop cultures rich with social capital. Catholic schools, for instance, often serve working-class student populations, but their common curriculum, high performance standards, and more personalized instruction and mentoring have generally resulted in relatively high performance rates. In other words, a surplus of social capital can make up for a deficit of financial capital (Bryk, Lee, & Holland, 1993).

## THE IMPORTANCE OF SCHOOL CULTURE AND SCHOOL CULTURE RESEARCH

The commonality among these three themes is the idea that schools can be compared according to the quality and nature of social relations among the people in the school and the common modes of behavior, belief, and values that emerge from these relations over time. These social elements of schooling have traditionally been deprioritized by educational policies (such as No Child Left Behind of 2001) and evaluations that focus on the more concrete aspects of schooling, such as course offerings, teacher training, per pupil expenditures, and class sizes. Yet, the rich history of school culture research clearly suggests that this is a mistake. The culture of a school helps to determine whether the school is equipped to fulfill its educational mission and whether its students are able to achieve academic success and socioemotional well-being.

**SEE ALSO** Volume 1: *Intergenerational Closure; Peer Groups and Crowds; Policy, Education; Private Schools; Social Capital; Socioeconomic Inequality in Education; Stages of Schooling; Youth Culture.*

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## SCHOOL READINESS

Schooling is a central aspect of childhood in most cultures around the world. In the United States, kindergarten has traditionally been viewed as the beginning of formal schooling, and most U.S. children attend kindergarten at or around age 5. However, educators and researchers have begun to focus more closely than in the past on the skills, knowledge, and habits children have upon entering formal schooling, often referred to as their *school readiness*, which is developed in the early childhood years. Because there is mounting evidence that these early competencies have a significant influence on children's later school success and life trajectories, experts have become increasingly aware of their central role in overall child and human development.

Although different early childhood experts define school readiness in different ways, there is general consensus that skills that promote later reading, writing, and mathematics development are important aspects of school readiness. Some dimensions used by the U.S. Department of Education to measure school readiness include a child's ability to recognize letters of the alphabet, count to 20 or higher, write her or his name, and interact with storybooks (U.S. Census Bureau, 2008). Beyond academic skills, many experts also cite motor skills and physical development, language development, and social and emotional growth as key school readiness components (Rouse, Brooks-Gunn, & McLanahan, 2005). As the National Governor's Association's Task Force on School Readiness (2005) explained:

> Ready children are those who, for example, play well with others, pay attention and respond positively to teachers' instructions, communicate well verbally, and are eager participants in classroom activities. They can recognize some letters of the alphabet and are familiar with print concepts (e.g., that English print is read from left to right and top to bottom on a page and from front to back in a book). Ready children can also identify simple shapes (e.g., squares, circles, and triangles), recognize single-digit numerals, and count to 10. (p. 1)

Pamela High and the American Academy of Pediatrics's Committee on Early Childhood, Adoption, and Dependent Care (2008) classified four conceptualizations of school readiness in the research literature on education and child development:

1. the idealist/nativist view, which emphasizes a child's developmental maturity, particularly in such areas as self-control and the ability to work with peers and follow directions;
2. the empiricist/environmentalist model, which focuses on the knowledge and behavior a child has been taught;
3. the social constructivist perspective, in which the major focus is on the community values and expectations to which a child has been exposed;
4. the interactional relational model, the one most widely recognized by child developmentalists, which emphasizes the individual child, the environment in which he or she learns and develops, and the ongoing interaction between the two.

Researchers have developed and used numerous standardized tests to measure school readiness, and, given the multidimensional nature of school readiness, these tests vary widely (Rock & Stenner, 2005). One of the

most commonly used testing instruments, the Peabody Picture Vocabulary Test–Revised, measures a child's vocabulary size by presenting the child with pictures on cards, which he or she is required to match with a stimulus word that is read aloud. The Wechsler Preschool and Primary Scale of Intelligence–Revised is a wider-ranging battery of tests used to assess individual learning patterns in such areas as vocabulary, word reasoning, object assembly, and comprehension. The Stanford–Binet Intelligence Test measures cognitive ability in areas such as verbal reasoning, abstract/visual reasoning, quantitative reasoning, and short-term memory. More recently developed testing instruments, such as those used in the Early Childhood Longitudinal Study–Kindergarten, focus not only on cognitive development and skills but also on social/behavioral and physical/motor skills (Rock & Stenner, 2005). Despite the wider range of school readiness components measured by recent tests, however, many early childhood advocates question the reliability of these assessments to predict school readiness and express concern about the overuse of standardized measures to make educational decisions that may have long-term effects on a child's future schooling (High & Committee on Early Childhood, Adoption, and Dependent Care, 2008).

## VARIATIONS IN SCHOOL READINESS

One of the main reasons why school readiness has received increased attention is that research has shown that children enter kindergarten with widely varying levels of many of the skills and competencies that make up school readiness. Early childhood researchers have studied a host of factors to determine whether they contribute to a child's cognitive development and skills in the preschool years, including physical health, family structure, parenting styles, and weight at birth (Rouse et al., 2005). Research has consistently shown that socioeconomic status—a cluster of factors that includes family income as well as a child's access to learning resources and parents' level of educational attainment and expectations—is one of the variables most strongly associated with school readiness. Valerie E. Lee and David T. Burkam (2002), authors of *Inequality at the Starting Gate*, reported that the average cognitive scores of children in the highest socioeconomic category are 60% higher than those of children in the lowest category. Moreover, a frequently cited book by Betty Hart and Todd R. Risley (1995) notes that 3-year-olds whose parents have "professional" jobs have vocabularies that are 50% larger than those of children from working-class families and twice as large as those of children whose families receive public assistance.

Researchers also have found school readiness gaps among students of different racial, ethnic, and language groups. Overall, Black, Hispanic, and American Indian students have been found to have significantly lower prereading, premathematics, and vocabulary skills at school entry than White and Asian American students. A report by Richard Rothstein and Tamara Wilder (2005) noted that the average Black student begins school at the 40th percentile in school readiness, compared to the 57th percentile for the average White student. In addition, data on California kindergartners drawn from the U.S. Department of Education's Early Childhood Longitudinal Study showed that fewer than one-fifth of the children for whom English was a second language scored above average on reading and mathematics tests (Gándara, Rumberger, Maxwell-Jolly, & Callahan, 2003).

As many researchers in education and other fields have noted, race and ethnicity are often closely aligned with socioeconomic status. In an analysis of school readiness gaps by race, ethnicity, and socioeconomics, Greg Duncan and Katherine Magnuson (2005) pointed out that whereas 10% of White children live in poverty, 37% of Hispanic and 42% of Black children do. They also find that, although it is difficult to quantify the effects of poverty and other components of socioeconomic status on school readiness, there is evidence that socioeconomic status differences play a significant role in these early learning gaps by race and ethnicity.

School readiness gaps by race, ethnicity, and socioeconomic status are of particular concern to educators and researchers because of strong evidence that they are associated with what have been called "achievement gaps" in later schooling, all the way up through high school, which in turn affect children's future job choices and overall life trajectories. Throughout K–12 schooling, Black and Hispanic students, on average, score lower on most measures of academic achievement than their White and Asian American peers. A widely cited analysis by Meredith Phillips, James Crouse, and John Ralph (1998) in the Brookings Institution book *The Black–White Test Score Gap* suggests that about half the Black–White gap on standardized test scores at 12th grade can be attributed to gaps that exist at 1st grade. Similarly, Rothstein and Wilder (2005) estimated that Black, Hispanic, and low-income students are, on average, 2 years behind their peers in reading and math by the end of fourth grade, 3 years behind by eighth grade, and 4 years behind by twelfth grade.

## EFFORTS TO BRIDGE SCHOOL READINESS GAPS

One of the most widely prescribed solutions to closing socioeconomic and other gaps in school readiness has

been improving access to preschool across racial, ethnic, and socioeconomic groups. Data reported by the National Institute for Early Education Research at Rutgers University indicate that more than 70% of 3-year-olds from families with incomes of more than $100,000 attend preschool, compared to less than 40% of 3-year-olds from families with incomes of less than $60,000 (Barnett & Yarosz, 2007). The wide availability of federally funded Head Start preschool programs, which target low-income communities, and the growing number of state-funded preschool programs have closed the gap in preschool attendance between Black and White children: Black children now attend some form of preschool in slightly greater percentages than their White peers; about half of 3-year-olds and more than 75% of 4-year-olds. Hispanic children, however, still attend preschool in the lowest numbers: Only about 30% of Hispanic 3-year-olds and 60% of Hispanic 4-year-olds attend preschool (Barnett & Yarosz, 2007).

Researchers question why the gaps in school readiness persist even as some gaps in preschool attendance have closed, and some point to what they say are differences in the quality and focus of the programs attended by high-income and low-income children. Economist Jane Waldfogel (2006), author of *What Children Need*, emphasizes the difference between *preschool*—which can include a wide range of services such as home care, private day care centers, and Head Start—and *prekindergarten* programs that are usually connected with school districts and are specifically designed to teach children the kinds of skills they will need in kindergarten and the first few years of elementary school. Whereas Head Start is an important resource for many children who might otherwise have no access to preschool, Waldfogel and other researchers have cited evidence that some Head Start programs do not promote school readiness as effectively as the best-quality private programs or school-based prekindergarten.

There also is evidence that access to school-based prekindergarten programs may have the potential to narrow school readiness gaps along racial, ethnic, and socioeconomic lines. One study conducted by Katherine Magnuson, Christopher Ruhm, and Jane Waldfogel (2004) found that students who had attended prekindergarten had higher reading and math skills upon entering school than those who had not; moreover, children from low-income homes, many of whom were Black, Hispanic, or from immigrant families, experienced long-lasting benefits from the prekindergarten programs. Another study of 339 New Jersey children randomly assigned to either full-day or half-day prekindergarten found that those who had attended the full-day program had better literacy and mathematics skills than those in the half-day program—and that full-day prekindergarten seemed to narrow school readiness gaps between children from upper- and lower-income homes (Robin, Frede, & Barnett, 2006).

## GREATER AWARENESS OF SCHOOL READINESS

Recent research such as that highlighted previously, as well as the efforts of early childhood education advocates, have raised both policy makers' awareness of school readiness as an important issue and interest in prekindergarten programs as a possible solution to persistent school readiness gaps. Most recent efforts to improve access to high-quality prekindergarten programs have taken place at the state level. According to National Institute for Early Education Research data, more than 1 million U.S. children now attend state-funded prekindergarten programs, which are offered in 38 states, and interest in the idea of universal prekindergarten has been growing steadily.

Another focus of more recent discussions about school readiness has been not only children's readiness for school but schools' readiness for children. The children who enter school in the United States are an increasingly diverse group. Roughly one in five children currently attending school in the United States is either an immigrant or the child of an immigrant, and this number is rapidly growing. Moreover, U.S. Census Bureau data show that nearly half of all children under 5 in the United States are from groups classified as racial or ethnic minorities. The FPG Child Development Institute, a group based at the University of North Carolina at Chapel Hill, focuses some of its work on examining how schools can be made more ready for children through such practices as addressing the specific learning needs of English-language learners, incorporating "culturally responsive practices" that take into account the diversity of children's ethnic and racial backgrounds, and providing early intervention for students who may be eligible for special services.

Other recent research on issues potentially related to school readiness has focused on such areas as neuroscience (studying the ways early experiences affect brain development and thus cognitive ability); health and wellness, including birth weight and maternal health; and differences in parenting practices (Rouse et al., 2005).

Given the growing diversity of the school-age population in the United States and the evidence that school readiness is strongly associated with success in later schooling (which is, in turn, associated with better future outcomes), school readiness is a concept with far-reaching implications both for the individual life course and for the composition of American society in years to come.

**SEE ALSO** Volume 1: *Child Care and Early Education; Cognitive Ability; Policy, Education; Racial Inequality in Education; Socioeconomic Inequality in Education; Stages of Schooling.*

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*Michael Sadowski*

# SCHOOL TRACKING

Curriculum differentiation—the division of a domain of study into segments and/or the division of students into groups—is an important feature of schools in the United States. Tracking is one possible outcome of curriculum differentiation.

Aage Sørenson (1970) identified key dimensions of curriculum differentiation. Two dimensions—*horizontal* differentiation and *vertical* differentiation—concern the basis of the differentiation. Horizontal differentiation divides the curriculum into domains of study. For example, the division of foreign language study into German, French, and Spanish is horizontal differentiation. Vertical differentiation, however, reflects a division of students along lines relevant for learning, such as, for example, prior knowledge. The division of French into introductory (French I), intermediate (French II), and advanced (French III) provides an example of vertical differentiation. In vertical differentiation, students' performance in one course depends on their mastery in the previous course, a dependence reflecting the ordered nature of vertical differentiation.

Another key dimension of curriculum differentiation is *scope*, which reflects the extent to which students share the same peers over the school day. If scope is high, groups are segregated.

*Electivity*, which refers to the degree to which students' desires matter for their curricular placement, is another key dimension. *Mobility* and *selectivity* are two additional dimensions. Mobility concerns the amount of movement across curricular positions, and selectivity measures the degree of homogeneity within the curricular positions. These dimensions are important tools for understanding curriculum differentiation and, by extension, tracking.

## TRACKING: CLASSICAL DEFINITION AND HISTORICAL BASIS

Tracking has been defined in various ways. One restrictive view regards tracking as existing only when a formal process assigns students to explicit, overarching programs encompassing multiple subjects and years. Others define tracking as an association across disparate subjects, regardless of whether or not a formal program

assignment process exists. Others claim that an association of course-taking across time is tracking. And the least restrictive definition sees curriculum differentiation *itself* as tracking.

Matters were apparently more straightforward in an earlier epoch, one in which analysts suggest that *classical* tracking existed. Under classical tracking, students are formally assigned to overarching programs that determine the level of all of their academic courses.

Classical tracking was the aim of original tracking advocates who argued that the vast majority of students should be taught "followership," which would lead those students to uncritically parrot the views of their ostensible superiors (Finney, 1928). Further, these advocates contended that some students should be taught leadership, so that they could eventually, unapologetically, take power. In other words, these advocates sought *disparate socialization,* an aim that, they argued, required students to be consistently segregated.

These reformers defended classical tracking using early-20th-century theories of intelligence that asserted the existence of a generalized intelligence. In this view, differences in a person's ability across domains were trivial. Thus, one could identify the top students, provide them with exposure to challenging material in all domains, and avoid spending resources on those deemed constitutionally unable to grasp complex material.

Over time, classical tracking took root in the United States. During a period of high immigration and rising nativist fears, many reformers believed schools could "Americanize" immigrant youth (e.g., Kelley, 1903). In order for schools to do so, however, immigrant youth had to be forced into school. Compulsory schooling laws accomplished this aim, but produced another dilemma. Should schools teach a classical college preparatory curriculum of Latin and Greek to all students? Or should schools elaborate the curriculum to provide different types of training? Classical tracking was the eventual answer (Kliebard, 1995; Spring, 1972; Wrigley, 1982).

Consistent with this historical basis, evidence indicates that students in different tracks receive different amounts and kinds of resources. For example, lower-track classes are less likely to have experienced or capable teachers (Finley, 1984; Kelly, 2004). Further, consistent with the aim of differential socialization, courses of different tracks differ in multiple ways. Researchers have found that low-track classes require students to complete repetitive tasks based on simplified texts that are replete with lists to memorize, while, in contrast, high-track classes at the same school ask students to engage creatively using complex texts that demand students sift and synthesize the material (e.g., Oakes, 1985; Page, 1990).

Historically tracking appears to have been a major cleavage in students' experience. The best evidence suggests that, prior to 1965, most high schools assigned students to explicit, overarching programs that determined their academic course taking and thus governed the socialization to which they would be exposed. Classically, there were three broad tracks: college preparatory, general, and vocational. Students were assigned to one such program upon entering high school (e.g., Hollingshead, 1949; Alexander, Cook, & McDill, 1978), and students in a school spent most of their time with students in the same track.

## THE DECLINE OF CLASSICAL TRACKING

Under episodic pressure in the courts (e.g., Hayes, 1990), and in a 1960s context in which the claims of general intelligence were under attack, school districts began to alter their formal practices. Evidence suggests that the classical system of tracking began to erode in the late 1960s. Donald Moore and Suzanne Davenport (1988) studied four urban districts in 1965 and 1975, finding that all four had ended the assignment of students to overarching programs by 1975. Yet the districts maintained within-subject curriculum differentiation; students in the same grade could still take different levels of math, English, and so on. Districts formally decoupled course-taking *across* subjects, but maintained multiple levels of coursework within subjects. This change and stability allowed students to take different course levels in disparate subjects.

Evidence indicates that by the early 1980s most schools had moved similarly, dismantling the formal apparatus of cross-subject tracking (Oakes, 1981). By the early 1990s, 85% of schools lacked formal mechanisms of tracking (Carey, Farris, & Carpenter, 1994).

## THE AFTERMATH OF CLASSICAL TRACKING: MULTIPLE DEFINITIONS, MULTIPLE CONTROVERSIES

It is apparent that most schools have no formal process of overarching track assignment. Samuel Roundfield Lucas (1999) contended that an unremarked revolution in tracking had occurred, unremarked in that analysts acknowledged the change in school practice, but research methods did not keep pace with the change. Prior to the end of classical tracking, analysts routinely used students' self-reports or school personnel reports of students' track location (Gamoran & Berends, 1987). Indeed, scholars debated what discrepancies in the two measures signified (e.g., Rosenbaum, 1980 & 1981; Fennessey, et. al, 1981). However, the end of formal program assignment

made students' self-reports purely social-psychological measures (Lucas & Gamoran, 2002), and rendered the referent of school personnel reports even more opaque.

In that context, some maintain that curriculum differentiation *is* tracking, because as long as there is curriculum differentiation, students in the same school may be exposed to vastly different levels of rigor and types of socialization. Although some research has studied students' level of placement in individual subjects, this research is based on the inherent importance of those subjects, not on an explicit claim that curriculum differentiation is tracking. However, the view that curriculum differentiation is tracking has been the basis of proposals to end curriculum differentiation and instruct all students in heterogeneous classrooms. This policy proposal has often been called *detracking*, implying thereby that curriculum differentiation is tracking (e.g., Wheelock, 1992).

However, others resist the idea that curriculum differentiation is tracking, pointing to the original basis of tracking in a desire to make socialization consistent for any given student. In this view, the key issue concerns the degree to which courses are associated. Thus, some analysts contend that if students' level of course in one subject predicts their level of course in a disparate subject, this signals de facto tracking. When placement level in one subject predicts placement level in a disparate subject, the courses are associated (e.g., Lucas, 1999).

A great deal of research has been conducted under the assumption that students' academic programs are a collection of associated courses. Some of that research occurred prior to the end of classical tracking, and the questions given attention then have continued to be studied after the unremarked revolution. The research has concerned four principal questions:

1. What are the sources of tracking at the school-level?
2. What are the sources of the assignment of students to various levels of study?
3. What are the effects of students' track location? and
4. What is the source of any effects of students' track location?

## PREDICTORS OF SCHOOL-LEVEL TRACK STRUCTURE

The school-level factors that predict the existence or characteristics of tracking are important because any determinant of track structure is thus a determinant of the in-school environment students navigate. Learning the basis of that environment, therefore, is important for understanding the underlying basis of important aspects of adolescent experience and the context within which important life course transitions occur.

Maureen T. Hallinan (1994a, 1994b) maintains that tracking is a technical pedagogical device that allows students to receive education tailored to their prior preparation. In this view, tracking allows the construction of groups homogenous on prior achievement. In contrast, Jeannie Oakes (1994a, 1994b) contends that tracking inescapably involves segregation along lines of race, ethnicity, and class. Indeed, in this view the construction and maintenance of tracking is best understood as a means of buttressing such segregation after the end of de jure school segregation.

Research on detracking and on the factors predicting the strength of tracking systems addresses this debate. Ethnographic research on detracking shows that socioeconomically advantaged parents contest detracking until some advantages are preserved for their children (e.g., Wells & Serna, 1996). Yet if advantaged children receive advantageous positions, then both detracking reform and the technical pedagogical basis of tracking are both undermined.

Analysts find that the more race (Braddock, 1990) or class (Lucas, 1999) diversity, the higher scope—that is, the more pronounced de facto tracking is. Socio-demographic diversity is important even after the profile of student achievement is controlled in public (but not private) schools (Lucas & Berends, 2002). Further, the profile of students' achievement matters for track structure; the more highly correlated students' prior achievement is across domains, the higher the association in students' placements across subjects (Lucas & Berends, 2002). This result suggests a technical basis for some amount of de facto tracking. Still, the degree of de facto tracking appears driven, in part, by race and class diversity, consistent with the interest in segregation that provided the historical basis of the implementation of classical tracking.

## PREDICTORS OF STUDENT ASSIGNMENTS

Another key question asks what factors place students in different levels. If assignment is connected to factors other than prior achievement, the meritocratic basis of tracking is questioned, and one of the key technocratic rationales for tracking—its ability to produce groups homogenous on prior achievement so as to facilitate instruction—is undermined.

Research indicates that although measured achievement matters for placement, socioeconomic background matters as well (e.g., Gamoran & Mare, 1989; Mickelson, 2001; Jones, Vanfossen, & Ensminger, 1995). Ethnographic research reveals some of the ways social class enters the equation. Elizabeth Useem (1992) found that

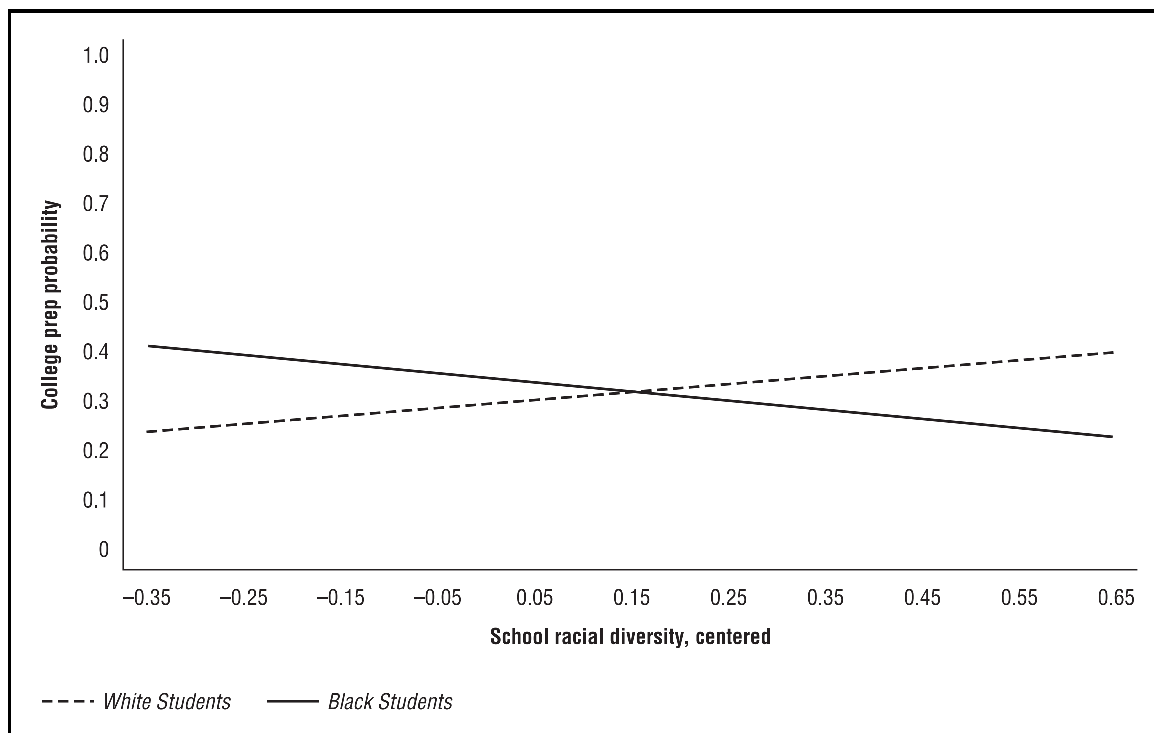


***Figure 1.*** *College prep probability by school diversity and student race.* CENGAGE LEARNING, GALE.

socioeconomically advantaged parents networked to obtain and distribute information amongst themselves, routinely intervened in placement decisions to assure high track placements for their children, and routinely acted to affect their children's course preferences.

The consensus concerning socioeconomic class and track location is not mirrored for race. Using nationally representative data, Oakes (1985) found that Black and Latino/a students were more likely to be found in vocational or remedial classes. Samuel Lucas and Adam Gamoran (2002), however, found a Latino/a disadvantage but no Black-White difference in college prep track assignment for 1980 sophomores, and parity for Blacks, Whites, and Latino/as amidst an advantage for Asians in their analysis of 1990 sophomores. Michael S. Garet and Brian DeLany (1988) found Blacks and Asians were more likely to be assigned to advanced mathematics classes than were Whites, whereas Roslyn Arlin Mickelson (2001) found Blacks disadvantaged in English class enrollment.

Evidence indicates that one explanation for the disparate findings is that schools differ appreciably in the relationship between race/ethnicity and curricular location (Lucas & Berends, 2007). That variation is not random: The more racially diverse the school, the less likely Blacks are, and the more likely Whites are, to enter college prep courses, even after test scores and parents' characteristics are controlled. Indeed, the differences resemble one-for-one substitution of Whites for Blacks in college prep courses as one compares more and less diverse schools (Lucas & Berends, 2007).

## EFFECT OF STUDENT ASSIGNMENTS

One oft-studied outcome is cognitive achievement. Research indicates an association between measured achievement and track location. Indeed, Gamoran (1987) found the achievement gap between college preparatory and non-college preparatory students exceeded the gap between high school graduates and drop-outs. One challenge in study effects of track location, however, flows from the research on track placement. That research, which finds social class, race, and other factors matter for track placement, implies that the students in any given track are not a random set of students. Thus, it could be that high track students would have higher test scores even if there were no tracking. Yet the difference between high-track and low-track student achievement appears to be caused by track placement, because when researchers control for the non-random assignment of

students to tracks, they still find that students in high tracks end up having higher achievement (Gamoran & Mare, 1989; Lucas & Gamoran, 2002).

Tracking could produce the effect on cognitive achievement by raising high-track students' achievement, lowering low-track students' achievement, or both. Alan C. Kerckhoff (1986) compared the outcome of British students of equal levels of achievement prior to their track assignment, and found that high-track students had high achievement growth while equivalent low-track students had less achievement growth. This pattern matches Thomas B. Hoffer's (1992) finding for middle school students in the United States. Hoffer (1992) compared not only high- and low-track students, but also schools with and without tracking. He found the usual advantage of high-track students compared to low-track students. However, comparing schools with and without tracking revealed that schools' overall level of achievement was virtually the same, because tracked schools improved the learning of high-track students but equally hindered the learning of low-track students.

Other outcomes have been studied as well. High-track students are less likely to drop out of school (Gamoran & Mare, 1989), more likely to receive encouragement for college (e.g., Hauser, Sewell, & Alwin, 1976), more likely to enter college (Rosenbaum, 1980), and have higher political efficacy (Paulsen, 1991) and academic engagement (Berends, 1995). General self-efficacy, however, appears unaffected once appropriate pre-track assignment controls are introduced (e.g., Wiatrowski, Hansell, Massey, & Wilson, 1982).

## THE SOURCE OF STUDENT ASSIGNMENT EFFECTS

Cognitive effects of track location exist and have been theorized in three ways. Effects may reflect an *instructional* basis, because lower tracks cover less content than do higher tracks (Gamoran, 1989). Effects may be *social,* because tracks provide different social contexts for students to explore and develop their selves and capabilities. Effects may be *institutional,* because tracking is a persistent organizational form and placements are arguably stable and public (Pallas, Entwistle, Alexander, & Stluka, 1994).

Evidence favors a role for instructional effects (Gamoran, 1989; Pallas, et al, 1994). Indeed, although tracking was originally motivated by the aim to teach students differently, some research suggests that low tracks would produce more achievement if they used the same approaches used in high-track classes (e.g., Gamoran, 1993). This is consistent with instruction as a key factor in producing track effects.

## FUTURE RESEARCH

Analysts have neglected some dimensions of curriculum differentiation. Electivity has been neglected, in part because students routinely report that they selected their courses when, in fact, researchers know that other factors, such as prerequisites and graduation requirements, play a large role in whether students will be allowed to take what they ostensibly desire (National Center for Education Statistics, 1981). No one has studied, using longitudinal ethnographic means, the coalescence of students' course-taking intentions and eventual behavior from before tracking to the end of high school. Until such research is conducted, carefully attending to students' unfolding preferences and the factors influencing those preferences, it will be difficult to reach any conclusions concerning electivity and tracking.

Almost every research effort would allow one to ascertain the selectivity of tracks. However, few researchers report this information. The little research that has reported on selectivity—the degree to which groups are homogenous—suggests tracks are heterogenous. Mickelson (2001) finds that while some students in the 30th to 39th percentile range are placed in advanced English, other students in the 90th to 99th percentile are placed in regular English. Many such placement inconsistencies existed, suggesting that tracks are often heterogenous on prior achievement.

Some research has studied mobility. One criticism of classical tracking is that it locked students into trajectories from which they could not escape. Early research on track mobility sustained this imagery, describing tracking as a tournament in which upward mobility was impossible (e.g., Rosenbaum, 1976 & 1978). But research after the unremarked revolution suggests that while downward mobility is far more common, a non-negligible amount of mobility is actually upward (Lucas, 1999), and patterns of mobility through the complex curriculum structure appear affected by race and class (Lucas & Good, 2001). Given the importance of mobility for the fairness and implications of tracking, and given the limited understanding we have based on the research completed to date, more research on track mobility would be desirable.

Tracking continues to affect the lives of students in schools throughout the United States. Tracking allows students to be exposed to different levels of cognitive demand and types of socialization. Track structures are most pronounced in racially and socioeconomically diverse schools. Assignment to courses is not meritocratic, as social class has been shown to matter, and race appears to matter as well. That race and class matter is likely consequential, because track location matters for a wide variety of cognitive, affective, and socioeconomic outcomes. The pathways

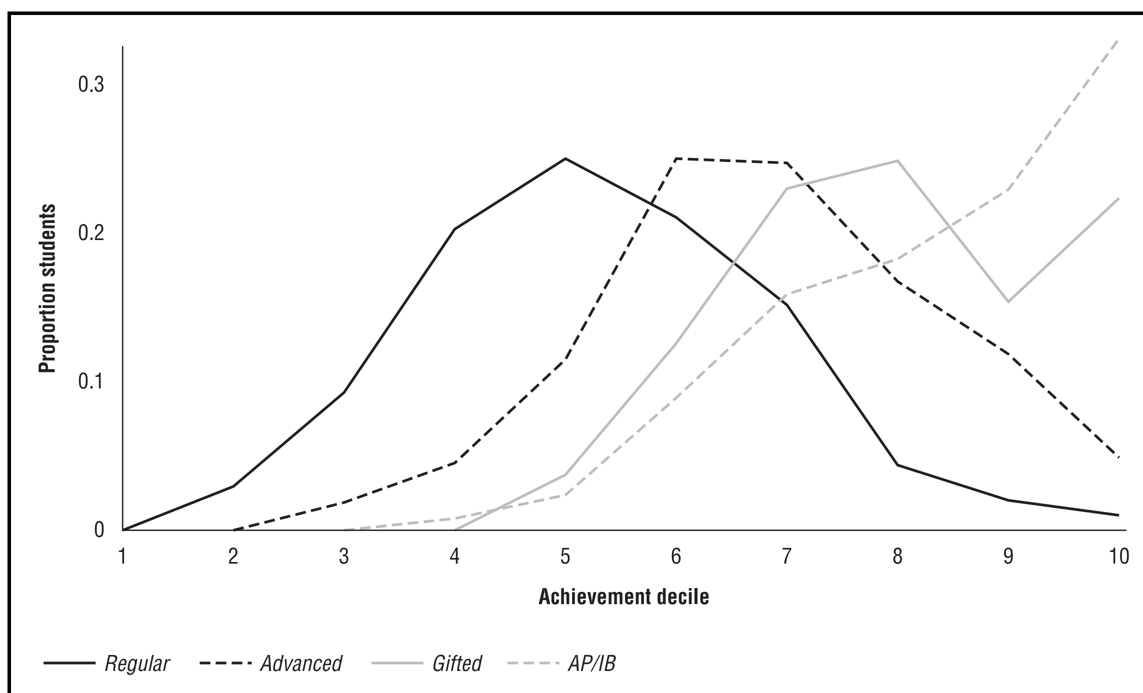


***Figure 2.*** *Distribution of prior achievement in four English courses.* CENGAGE LEARNING, GALE.

through which track effects are generated are contested, but instruction appears to be a key conduit for track effects.

SEE ALSO Volume 1: *Academic Achievement; College Enrollment; Gender and Education; High-Stakes Testing; Learning Disability; Racial Inequality in Education; Socioeconomic Inequality in Education; Stages of Schooling; Vocational Training and Education.*

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***Samuel R. Lucas***

# SCHOOL TRANSITIONS

Common features of virtually all individuals' educational careers are disruptions in organizational contexts, pedagogical approaches, and social relationships during school transitions. Most frequently, these transitions are planned or orchestrated as rites of passage from one level of schooling to the next made by student cohorts each year. Other changes in school enrollment are essentially random events occurring in individuals' lives, which often coincide with other transitions in residence and family status. Regardless of whether they are rites of passage or random events, school transitions involve changes in status and context that have myriad implications for individuals' developmental, social, and academic trajectories. This entry begins by describing the different types of school transitions and then outlines issues to be considered when trying to understand the opportunities and challenges that individuals encounter when changing schools. The entry closes with a discussion of the implications of school transitions for life course research.

## TYPES OF SCHOOL TRANSITIONS

Moves between schools can be generally grouped into two types: (a) school transitions marking completion of

a program of study and entry into the next stage of schooling and (b) school transfers due to changes in an individual's enrollment or assignment to a particular institution. The former are often called *normative school transitions* in that, annually, student cohorts follow similar patterns of movement between schools as guided by institutional policies and practices. In contrast, the latter are often called *nonnormative school transfers* in that students' movements between schools are unpredictable because they are predicated on individual circumstances, such as a family's move or disciplinary problems (Alexander, Entwisle, & Dauber, 1996). Although sometimes considered together in studies of changing schools, these two types of transitions are fundamentally different in the processes that individuals experience.

Normative school transitions are the most frequent changes in enrollment because they are required by the organizational structures of almost all educational systems. In most developed nations, school systems are organized into levels that can be roughly classified as lower elementary, upper elementary, middle, lower secondary (or junior high), and upper secondary (or senior high; Shavit & Blossfeld, 1993). In the United States, these levels are generally equivalent to kindergarten through third grade, fourth through sixth grade, seventh and eighth grades, ninth and tenth grades, and eleventh and twelfth grades, respectively. Although transitioning between levels reflects a change in program status, students do not necessarily have to enroll in a new school, depending on its grade configuration (e.g., kindergarten through tenth grades compared to a traditional 4-year high school). Although policies on school-leaving ages vary by state, school attendance is generally compulsory from ages 5 to 16 (roughly equivalent to kindergarten through tenth grade) in the United States. Some individuals also enroll in preschool prior to entering the early elementary grades, and others attend postsecondary schooling at colleges and universities. Regardless of the level, all normative transitions occur between academic years as dictated by the grade configurations and academic programs of the schools involved.

In contrast, nonnormative school transfers are generally unpredictable in that these decisions to change schools are the result of an individual's life circumstances. Most frequently, school transfers are prompted by residential moves that cross school attendance zones, whether from one side of the street to the other or across the country. However, many school transfers occur for other reasons, such as a consequence of schools' disciplinary and other administrative actions or a result of parents' exercise of school choice, such as transferring a child from a public to a parochial school (Swanson & Schneider, 1999). Generally, one or a small group of students transfer between two schools at a given time. Although many school transfers are made in the summer months, they can take place at any time during the school year and may occur with little warning or planning.

Although these two types of changes in school enrollment are distinct, the transition between levels of schooling can coincide with a decision to attend a different school than most of a student's cohort from the prior school. In these cases, the difficulties and opportunities encountered by students during school transitions may share many similarities with those of students transferring between schools during summer months. However, transfer students are usually changing schools at times when few of their classmates, at either their prior or new schools, would be contemplating similar shifts in schools. Thus, as discussed below, the contexts and challenges encountered by transfer students are different than those transitioning between levels of schooling because they tend to make their transition alone and at an unexpected time.

## CONTEXTS OF SCHOOL TRANSITIONS AND TRANSFERS

Regardless of whether a transition or a transfer, changing schools usually involves a student's entry into a new building, and it frequently features discontinuity in instructional techniques or approaches. The transition may also entail disruptions in one's teacher and peer networks. The frequency and predictability of students' changes in school enrollments create organizational and educational problems that vary in their intensity and duration. Schools' attempts to address these potential problems shape the structural, pedagogical, and social contexts of students' experiences during transitions and transfers.

Schools experience annual changes in enrollment, with varying proportions of students transitioning between grade levels and others transferring between schools. At one end of the spectrum, new students at schools spanning kindergarten through twelfth grades may be basically limited to a cohort of entering kindergarteners to replace the graduating senior class exiting the year before. At the other end, urban and rural schools serving transient populations may have rates of student mobility so high that the composition of classrooms can change dramatically during an academic year. To the extent that changes in enrollment are due to predictable arrivals of successive cohorts, school districts and systems can institutionalize the transition process by establishing policies and procedures to regulate the flow of students and information about them (MacIver & Epstein, 1991). In contrast, large numbers of transfer students can create chaotic environments for all students as schools must adjust their allocation of classroom and other resources

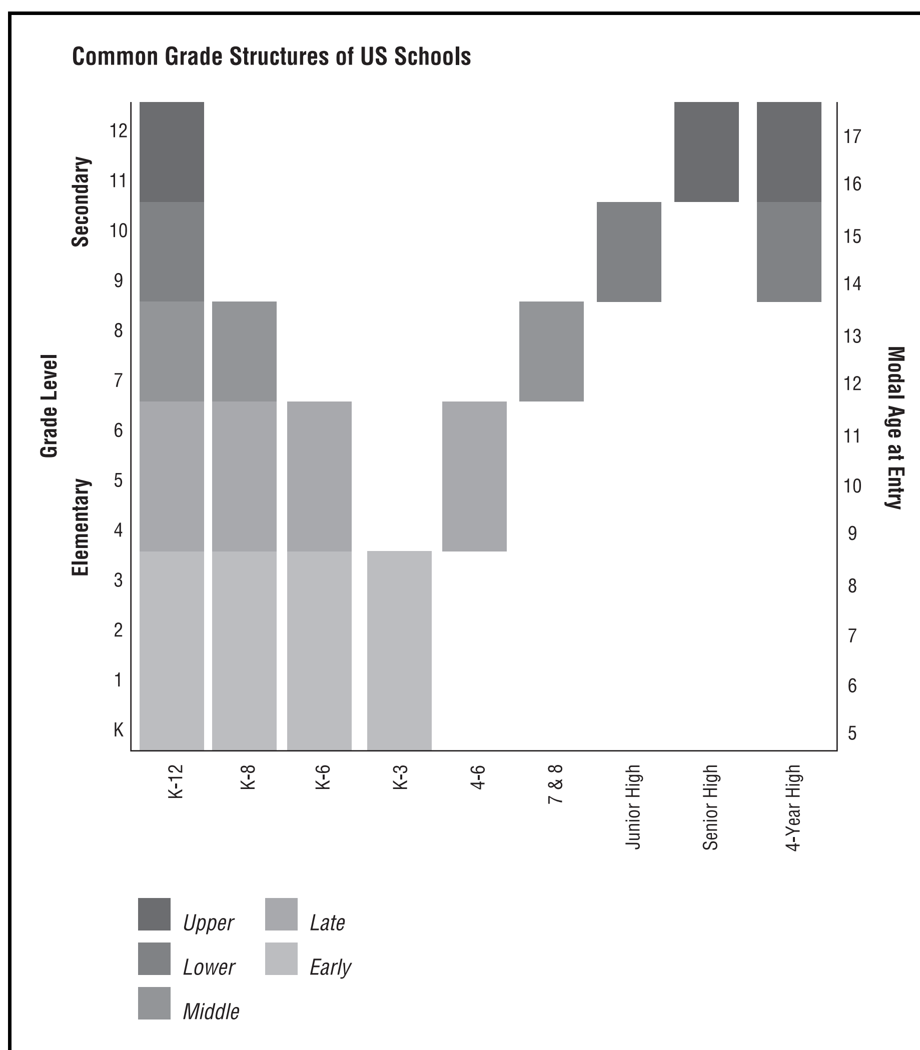


***Figure 1.*** *This figure outlines the major grade configurations in U.S. schools to highlight when transitions between levels of schooling are likely to occur.* CENGAGE LEARNING, GALE.

to accommodate their new classmates' needs (Ingersoll, Scamman, & Eckerling, 1989). Thus, from an organizational standpoint, managing the relatively predictable transition of successive cohorts is easier than assisting transfer students arriving under frequently chaotic circumstances.

One major source of organizational uncertainty is created by questions concerning new students' prior academic experiences and intellectual development. Most schools depend largely on official records and teacher recommendations accompanying new students in allocating them to classrooms and courses (Gamoran, 1992). Interpreting this information is easier when district feeder policies establish a consistent flow of students between schools, which facilitates the formation of both formal and informal relationships among school personnel (Schiller, 2005). For example, many school districts with schools linked by feeder patterns have personnel who meet to both exchange information about specific students and coordinate instructional practices and programs. Such meetings, however, become more problematic as the number of feeder schools increases and are almost impossible when a student transfers in from another district or state. In these situations, schools are more likely to establish internal assessments of prior academic progress to use in placing new students and provide more time in class for review of foundational curricular material (Riehl, Pallas, & Natriello, 1999). Despite schools' efforts to manage transition processes, however, students often encounter significant differences in instructional approaches and programs after changing schools that can disrupt their academic progress.

Changing schools usually requires students to also develop new relationships with peers, teachers, and other school personnel at the same time as they are encountering new academic environments. In addition to finding their way around a new building, new students usually must learn to negotiate the institutional procedures and social environments unique to each school (Eccles et al., 1993). Around the beginning of each academic year, most schools hold at least one orientation session to provide new students and their parents with information about policies they must follow and activities in which they may want to participate. Smaller numbers of schools establish mentoring programs or small learning communities to help new students connect with their teachers and form friendships with their peers. In contrast, transfer students, especially those entering during the middle of the school year, often receive little help in adjusting to the culture of their new school and integrating themselves into established friendship networks. Both members of incoming cohorts and transfer students are at risk of becoming socially isolated, yet they also have opportunities to identify with a new group of peers.

## RISK AND RESILIENCY DURING SCHOOL TRANSITIONS AND TRANSFERS

School transitions and transfers may precipitate changes in a student's academic success and social integration. The challenges and opportunities students encounter when entering a new school can dramatically affect their developmental trajectories in both negative and positive ways (Catterall, 1998). As noted earlier, most schools have programs to facilitate the integration of new students into their academic structures and improve the students' adjustment to a new social environment. However, an individual student's family circumstances, personality, and academic status also may influence how he or she is affected by the process of transitioning between schools.

Changing schools may disrupt a student's academic progress if the pedagogical approach—reflected in teaching style and curriculum—differs significantly between the two schools. Students transferring during the academic year are particularly likely to encounter severe discrepancies between what they were learning in the same class at each school (Lash & Kirkpatrick, 1994). Even within the same state or district, each class moves at a different pace and with varying emphases on particular topics based on the teachers' assessment of the students' strengths and weaknesses. These differences are particularly problematic for new students whose prior class was moving at a slower pace, as they will lack a similar foundation in basic concepts and skills compared to their new classmates.

Programs to coordinate curricula across feeder schools are intended to reduce differences in prior curriculum exposure among entering cohorts. However, these students must still deal with increasing conceptual complexity, more challenging tasks, and less personal attention from teachers with each transition between levels of schooling (Felner, Ginter, & Primavera, 1982). For example, students frequently first experience changing classrooms for some subjects when they enter middle school and do so for each class in high school. How successfully students adjust to new academic challenges and environments after either transfer or transition can have long-term consequences for their educational trajectories. A decrease in grades following a transition or transfer often signals that a student may be on a path to dropping out of school.

Similarly, newly arrived students are at risk of becoming socially isolated and alienated if their peer networks are significantly disrupted in the process of transitioning or transferring between schools. When entering a new school, transfer students are almost always required to build ties to peers who already have established relationships with longer-term classmates. Breaking into established social cliques can be particularly difficult when school transfers coincide with residential moves prompted by other life events, such as a change in parental marital status or a job loss (South & Haynie, 2004). Sometimes, however, school transfers are initiated by parents to distance their child from undesirable peer (or other) influences; such changes may not coincide with residential moves. In contrast, peer networks are likely to remain at least partially intact when cohorts transition between schools together. However, many students encounter difficulties adjusting to a new social status (i.e., being the youngest in a school instead of the oldest) and more diverse social groups when transitioning to larger schools. The larger pools of potential friends allow some previously marginalized individuals to redefine themselves as *normal* by identifying with new subcultures (Kinney, 1993). Individuals differ in their abilities to maintain or develop new connections to peers after entering a new school, which can also affect both their academic and social development.

## RESEARCH CHALLENGES AND FURTHER DIRECTIONS

Changing schools is a common feature of most individuals' educational careers, yet it is a complex process involving the interaction of institutional procedures and environments with students' readiness for the academic and social challenges they are likely to encounter.

Researchers are only beginning to understand why many students encounter difficulties that put them on the path to dropping out of school altogether (Roderick, 1993) whereas others find opportunities to blossom both academically and socially (Schiller, 1999). Investigators need to carefully specify the type or types of school transitions being studied to identify the particular processes and experiences that influence students' adjustment to new schools. For example, even if they remain in the same school, high school freshmen often experience similar changes in academic performance and social integration as those who transition into a 4-year high school (Weiss & Bearman, 2007). More studies following significant numbers of students through school transitions are needed to understand whether some changes in context—for example, from an urban to a suburban school—are more challenging for some students than others.

In addition, investigators need to consider what contributes to variation in how individuals are affected by school transitions. Changing schools may provide socially and academically struggling students with windows of opportunities for fresh starts, whereas more successful students may encounter more competition for positions in the elite groups. Studying school transfers can be particularly problematic because the difficulties students encounter may be due as much to the reason (e.g., a divorce or behavioral problems) for changing schools as to the transition process itself. Similarily, prior academic or social difficulties may become problematic again following school transitions and transfers. Disentangling these institutional and individual influences requires longitudinal study designs that allow a detailed examination of the transition process over time to determine what programs and interventions may work for which type of individuals.

**SEE ALSO** Volume 1: *Academic Achievement; High School Dropout; Peer Groups and Crowds; Policy, Education; Racial Inequality in Education; School Culture; Socioeconomic Inequality in Education; Stages of Schooling;* Volume 2: *School to Work Transition.*

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***Kathryn S. Schiller***

# SCHOOL VIOLENCE

Schools are critical in the life course development of children and youth. Success in school is an important developmental outcome in its own right. School performance also has important implications for a range of adulthood outcomes including mental health, suicide, mortality, substance abuse, criminality, employment, and poverty. Research has shown that feeling safe at school is related to success, and even low levels of violence can have detrimental effects on student well-being. On a daily basis, however, many students fear being or are victims of school violence, which may involve either social victimization, such as harassment, social exclusion, and humiliation, or physical violence such as being threatened or physically assaulted.

The study of school violence is complex because such violence stems not only from a broad range of intertwined individual and environmental-level factors, including the social conditions in schools, but also from family and neighborhood factors. Starting in the 1990s, increasing efforts have been focused on the development of effective strategies to reduce and prevent violence in schools. These efforts have been motivated, in part, by a series of particularly violent events in schools such as the now infamous 1999 Columbine school shooting in Colorado, when 12 students and one teacher were killed and 23 students were wounded. Theorizing and research on school violence has moved in recent decades from an individual criminal justice orientation toward a more complex ecological and life course approach, which can be seen in the evolving definition of school violence and the theories informing its study.

## DEFINITIONS AND THEORIES OF SCHOOL VIOLENCE

School violence, like most social phenomena, is complex. For example, even defining what is and is not considered school violence is not straightforward. Conventional definitions of school violence have been framed by a criminal justice orientation—the use of force by one person toward another that results in harm to that person or their property—situated within the school, including the student's travel to and from school. Benbenishty and Astor (2005) offered an excellent example of such a definition: "any behavior intended to harm, physically or emotionally, persons in school and their property" (p. 8). *Harm* is in the perception of the harmed, and may encompass verbal, social, and physical forms of violence. Benbenishty and Astor also assert, however, that school violence is shaped by elements of wider social and cultural contexts, including neighborhood and family characteristics, and by "policies, practices, procedures, and social influences within the school setting as well as the impact of the variables external to the school" (p. 7).

Offering a broader definition of school violence, Henry (2000) argued that school violence is perpetrated not just by individuals, but by organizations and policies, and that it is not always by force, but may also involve the misuse of power. Further, the harm may be physical or emotional, but may also be in the areas of economics, opportunity, or equal access. Finally, Henry asserted, as Benbenishty and Astor suggested, that school violence is not limited to the school grounds, or travel to or from school, because that denies the interconnectedness of the school and community. Which definition is more accurate and more compelling? The current trend in research and theory is to use the more complex definition.

A broad range of theories has been applied to study school violence. Social disorganization theory is one traditional approach developed by sociologists Clifford R. Shaw and Henry D. McKay in response to the rapid changes in immigrant and ethnic minority communities in Chicago during the early 1900s. According to social disorganization theory, relationships are seen as organized when individuals actively engage in community institutions that foster social support and connectedness. As a criminology theory, social disorganization locates disorganizing forces within communities by attributing violence to a breakdown in community relationships and institutions. Social disorganization theory says little, however, about "organized" neighborhoods, for example rural and suburban communities, which statistically show school violence rates that are similar to urban schools in terms of teasing and bullying.

Ecological theory, developed by the psychologist Urie Bronfenbrenner, has seen increasing application to the study of school violence. Ecological theory emphasizes the multiple environments of youth, which include school, family, peers, neighborhood, the larger society, and the dynamic interplay of these settings over time. An increasing number of researchers who study school violence apply ecological theory to understand this web of environments and the many factors that contribute to violence in schools. An ecological approach fits well with the increasingly complex definitions of school violence that have emerged since the late 1990s and is especially useful when trying to develop comprehensive efforts to reduce and prevent school violence.

## STUDYING SCHOOL VIOLENCE

Although school violence has been the focus of much media attention in recent decades, actual school violence rates have not changed significantly since the 1980s. Overall trend data, however, tell only the surface of the story. As described above, school violence is a function of

the wider social context; therefore patterns vary with the characteristics of the students, school, and community. Four approaches typically are used in studying school violence: qualitative interview studies, analyses of school records, surveys of students and school staff, and after-the-fact analyses of violent events in schools such as multiple-victim school shootings.

Qualitative approaches have two advantages: Researchers may "discover" things that were not known, and they may construct "thick" descriptions of school violence issues. For example, in an interview study examining the connection between school violence and the community surrounding a New York City middle school, Mateu-Gelabert and Lune (2003) found that conflicts flow in both directions. The authors found that 18% of the violent events in the neighborhood started at school, while 21% of the violent events in the school started in the neighborhood.

Schools keep records, and such records offer data for the study of school violence. Cantor and Wright (2002) asked a nationally representative sample of school principals about violent events reported to the police and found that most violent events in schools are concentrated in certain schools, with 60% of the serious violence reported occurring in just 4% of the schools from which data were collected. The highest rates of violence occurred in urban schools with a high percentage of minority students and high rates of economic disadvantage. Such findings are consistent with the widespread belief that urban schools experience more violence. Cantor and Wright also found, however, that out of the 4% of schools whose records revealed the highest rates of serious violence a large percentage (36%) were in rural areas. School violence surveys also gather data from school staff such as principals. For example, Crosse, Burr, Cantor, Hagen, & Hantman (2002) surveyed 882 principals from across the United States and found that 72% of middle school principals reported physical fights between students in their schools. By contrast, only 11% of elementary school principals reported such fights, while the figure for high school principals was 56%. Such variation can be looked at from a life course perspective: What is known about children and youth developmentally that would explain such a pattern?

The most widely used approach to studying school violence is with surveys. Such research reveals that a significant percentage of students feel unsafe and report experiencing violence in schools. For example, in a survey of 7th, 9th, and 11th graders in a suburban school district, Cornell and Loper (1998) asked students about experiences of violence in the past 30 days, both "in school" and "out of school," with "in school" defined as the building and grounds and on the way to or from school. They found that 20% of students reported having been in a physical fight at school and 13% reported carrying a weapon to school for protection in the past 30 days. An important survey source of school violence patterns is the *Indicators of School Crime and Safety*, published annually starting in 1998 by the U.S. Departments of Education and Justice (Dinkes, Cataldi, Lin-Kelly, & Snyder, 2007). In this report, data collected for the period from 1992 to 2005 indicated a general decline from 10% to 4% of students aged 12 to 18 who reported being physically victimized during the previous 6 months. Rates varied by gender, however, with 10% of boys being threatened or injured compared to 6% for girls.

Although some survey studies have found that Whites experience lower rates of school violence than African Americans and Latinos, Chandler, Chapman, Rand, & Taylor (1998) found in a national sample of students that after accounting for the impact of socioeconomic conditions, African American students reported only slightly higher rates and Latino students slightly lower rates than White students. Such findings do suggest that some of the variation in school violence may be related to higher rates of poverty and historical patterns and experiences of inequality. Some authors have suggested that school violence increases when social problems—such as poverty, unemployment, drug abuse, crime, and child maltreatment—are left unaddressed. The following question emerges from these suggestions: How might such social conditions relate to violence in schools? One thing is clear: Despite variations in rates in local schools and communities, school violence is a pervasive problem affecting schools across the United States and around the world. Violence within specific schools, however, is linked to the social conditions of the surrounding neighborhoods and larger community.

Researchers also study school violence by retrospectively examining particularly violent events. Although school shootings garner high levels of media attention, violent deaths in schools are quite rare. Much more common are violent deaths of students outside school, although as discussed above community and school violence is connected. The year 1999, that of the infamous Columbine massacre, represented an average year for violent deaths, with a total of 33 murders committed at schools (Dinkes et al., 2007). This statistic suggests that the actual number of murders at schools occurring elsewhere, most typically urban schools, was low that year. Multiple-victim school shootings are unpredictable, but have been increasing in frequency, typically occur in suburban and rural communities, and are most often perpetrated by White males. Examinations of multiple-victim events in schools, such as Columbine or Red Lake (Minnesota) High School have revealed two clear patterns: The shooters were suffering from mental health

***Columbine Massacre.*** *Columbine High School security video shows Dylan Klebold and Eric Harris in the cafeteria.*
© REUTERS/CORBIS.

problems and had previously been victims of teasing, bullying, or social rejection (Leary, Kowalski, Smith, & Phillips, 2003). The question then becomes: How are more common types of school violence linked to more rare school shootings? An important consequence of high-visibility school shootings is that policymakers and educators have increased their attention to the widespread problem of more common types of school violence, leading to increased efforts and government funding for prevention and reduction efforts.

## PREVENTING AND REDUCING SCHOOL VIOLENCE

Just as the definitions, study methods, and patterns of school violence are varied and complex, so are efforts at reduction and prevention. Such efforts include procedures to make schools safer by keeping out weapons and aggressive students, initiatives to reduce teasing and bullying, the mapping of individual schools to identify where in those schools violence is most likely to occur, and, finally, comprehensive programs to change the social climate in a school.

In regard to the goal of keeping weapons and high-risk students out of schools, one such effort has been the proliferation of "zero-tolerance" policies. Such policies dictate that students who bring weapons to school will be expelled. This policy originated with U.S. Customs to combat drug smuggling in 1988. It was picked up by schools in a few states and then was made a federal law in 1994 with the passage of the Gun-Free Schools Act, which mandated that states punish students bringing guns (most states included all "weapons") to school with yearlong expulsions. By 1998, 91% of public schools had zero-tolerance policies, and as a result of such policies a total of 2,554 students were expelled for bringing a weapon to school during the 2001–2002 school year. There is little evidence, however, that these policies are effective, and they have been so rigidly enforced that students have been expelled for minor offenses, including bringing into a school such objects as a squirt gun, a 5-inch plastic axe as part of a Halloween costume, a rocket made out of a potato chip can, and nail clippers (Skiba, 2000). Skiba found these overreactions are not rare, whereas the serious infractions these policies were originally intended to address are rare.

Research has found that suspension and expulsion as a disciplinary strategy disproportionally affects poor and African American students. Such policies deny access to educational opportunities in the short- and mid-term, which can negatively impact academic progress. In the long run, such denial of access can negatively impact the educational trajectories of students, which can have lifelong consequences in terms of graduating from high school, employment opportunities, and a cascade of other negative adult outcomes as discussed above in the introduction. It is easy to see Henry's point made above—that school policies can do violence to students.

The Bully Prevention Program, developed by the Norwegian psychologist Dan Olweus, is an effective program designed to reduce teasing and bullying in schools. The program encompasses interventions focused on the school, classroom, and individual levels, including interventions for bullies and victims, and to elicit bystanders to intervene to help victims. The intervention process starts with a survey of students to assess the extent of the problem, followed by a schoolwide meeting that includes parents to discuss the results of that assessment survey and get everyone onboard with the need for change. Finally, the interventions are implemented, including clear rules in the school about teasing and bullying and classroom meetings to discuss these rules and ongoing problems.

Mapping the unsafe places in schools, including where and when students are more likely to become victims, was an important development in school violence prevention that emerged from the research of Rami Benbenishty and Ron A. Astor. These authors have also proposed an ecological approach to preventing school violence that takes into consideration the complex interplay between the school and the surrounding environment (Benbenishty, Astor, & Estrada, 2008). For example, they suggest that all schools complete comprehensive schoolwide assessments of violence, and they point out that the federal No Child Left Behind Act of 2001 calls for assessments of the level of safety in schools, the results of which are supposed to be made publicly available, although few

schools currently complete such assessments. The authors' comprehensive assessment strategy stresses the importance of gathering data from multiple informants—students, teachers, parents, and administrators—and they have developed strategies for how to best use the results to most effectively promote a successful change effort.

Another promising approach to reducing violence is to change the social climate in schools. The term *social climate* refers to the quality and nature of the interpersonal relationships that influence students' behavior and social functioning. This approach, adapted from a public health model, has three levels, termed *universal*, prevention efforts for all students; *selected*, for interventions delivered to students at risk; and *targeted*, for interventions for students who have been aggressive. Bowen, Powers, Woolley, and Bowen (2004), applying an ecological framework while identifying risk factors at the individual, family, peer group, school, and community levels, have described strategies to apply this three-level approach to reduce and prevent school violence. For example, an implementation could include: (a) a universal schoolwide program such as Responding in Peaceful and Positive Ways, which was developed by Albert D. Farrell to advance the social and conflict-resolution skills of all students; (b) a group-based intervention such as the Anger Coping Program, which was developed by John E. Lochman for students with some problematic behaviors; and (c) targeted interventions for students with ongoing problems with aggression such as Multisystemic Family Therapy, which was developed by Scott W. Henggeler.

## FUTURE DIRECTIONS

For schools to accomplish their central goal, nurturing the learning and growth of students, they must be and feel like safe places. Schools are most effective when students see the school as welcoming and supportive, and when students look forward to being there (Woolley, 2006). If school is a place where students are teased or bullied, or—even worse—stabbed, shot, or live in fear of a classmate going on a shooting rampage, then the central goal of learning is severely undermined.

With the downturn in reports of victimization in schools that occurred in the period encompassing the last years of the 20th century and the first years of the 21st, it appears that the increased efforts to study this problem and develop strategies to address it may be working. Nevertheless, researchers, policymakers, and school administrators have much work to do to achieve the goal of all students feeling safe at school. The development of more complex definitions and more life course and ecological orientations to this problem have been positive developments. Future research may seek to understand the commonalities found in school violence between schools in diverse settings in order to inform the development of more robust school violence intervention and prevention efforts.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Bullying and Peer Victimization; Policy, Education.*

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## SCHOOL VOUCHERS

**SEE** Volume 1: *Policy, Education.*

## SEGREGATION, SCHOOL

Social science research in school segregation has both informed and been informed by legal consideration of segregated schools. In the 1954 *Brown v. Board of Education*, the U.S. Supreme Court declared racially segregated schools to be "inherently unequal" and therefore a violation of the Fourteenth Amendment of the U.S. Constitution. Although this ruling initially made very little change in the extent of school segregation in the 17 states that had laws requiring it (Orfield & Lee, 2007), it had an important effect on social scientists because of footnote 11, in which Chief Justice Earl Warren cited social science studies as part of his argument about why segregation was harmful. In particular, the decision and subsequent legal and policy actions to implement the decision created a fertile opportunity for social scientists to examine the extent of segregation (or desegregation), how school segregation related to other types of societal segregation, and the effect of judicial and policy actions, and to investigate the ways in which school segregation and desegregation affected students attending these schools.

### WHAT IT MEANS TO STUDY SEGREGATION

The meaning of segregation from a social science perspective is distinct from the legal definition, so it is important to clarify terminology. Social scientists define school segregation in terms of the distribution of students of different racial/ethnic groups, often measured at the school-building level. Social scientists measure segregation in a variety of ways: different dimensions of segregation (e.g., concentration, exposure, dissimilarity), different levels of analysis (within schools, between schools, between districts), and different groups (usually two groups: White–Black, White–Latino, and so on; Massey & Denton, 1988).

Further, for several decades, there has been a legal distinction between *de jure* segregation, which refers to segregation that occurs as a result of government law or policy, and *de facto* segregation, which occurs in the absence of such law or policy. In subsequent Supreme Court decisions about school desegregation, the Court ruled that unless there is de jure segregation, school districts are not required to—and even may not be able to voluntarily—take action to address the patterns of school segregation that exist (*Freeman v. Pitts*, 1992; *Parents Involved in Community Schools v. Seattle School District*, 2007).

One of the major causes of segregated schools in the absence of overt policies that segregate students is the segregated housing patterns in most communities across the country. There is an interdependent relation between housing and school segregation: Because schools often draw their students from the surrounding neighborhoods, schools will be segregated if neighborhoods are. At the same time, evidence suggests that in areas where there is not complete desegregation across the metropolitan area, communities with segregated schools have higher levels of residential segregation (Frankenberg, 2005).

It is also important to differentiate how K–12 school segregation is different from the higher education context. For the past several decades, discussions of racial diversity in higher education have focused on the design, legality, and effect of affirmative action policies. These policies differ considerably from school desegregation, most notably in that they affect only a fraction of students whereas school districts are required to educate all students who reside in their boundaries.

### BASIC TRENDS IN SCHOOL SEGREGATION RESEARCH

The most fundamental area of study is understanding the extent of school segregation. One of the foremost authorities in documenting school segregation trends has been Gary Orfield, a political scientist and founder of the Civil Rights Project. Using national-level data, Orfield and his colleagues have consistently documented segregation for, in particular, Black and Latino students at the national, regional, and state levels (e.g., Orfield & Lee, 2007). Some of his findings include:

1. Black student segregation fell dramatically in the South from the mid-1960s to the late 1980s;
2. Latino segregation has been increasing continuously since the late 1960s;

3. Black segregation has risen since the late 1980s, and Black students nationally are more segregated than they have been since before 1970, when many of the most extensive desegregation plans were implemented;
4. White students are the most isolated students of any racial/ethnic group.

In addition, there are very different percentages of students in intensely segregated minority schools (defined as schools in which 0% to 10% of students are White) by region of the country. Until very recently, Black students in the South were the most desegregated; Latino segregation in the West is high. Quite high percentages of Black and Latino students attend segregated minority schools in the Midwest and Northeast, which is likely a result of the many small school districts that divide students, often by racial background, in these regions' metropolitan areas.

Whereas Orfield's analysis aggregates school-level segregation measures to the state, regional, or national level, most case studies of segregation examine segregation within a particular school district. In general, much of this research dates from the time when school desegregation plans were being implemented. These studies might use a conceptualization such as Orfield's intensely segregated schools to assess whether the number of students in such schools diminishes with the implementation of certain policies. In addition, social scientists may have used measures influenced by court decisions that relate to that school district. For example, in Charlotte, North Carolina, compliance with desegregation as required by the courts—who found Charlotte had illegally segregated students—was that every school had to have a percentage of Black students that was within 15 percentage points of the system-wide percentage (Mickelson, 2001). As a result, case studies of Charlotte often used this definition of segregation.

In addition to examining changes in segregation as desegregation policies were implemented, often under court or administrative supervision and primarily in the South, newer district-level studies examine desegregation after such policies are lifted (e.g., Mickelson, 2001; Orfield & Eaton, 1996). Policies can be ended once the court believes that the district has eliminated all traces of prior segregation policies or are "unitary" systems. However, these studies generally conclude that when race-conscious policies are abandoned there has been a return to segregation—sometimes quite rapidly—and associated educational inequality.

More recent studies suggest that district-level analyses may understate the extent of segregation, because these studies do not incorporate the substantial differences in racial composition among school districts. One estimate was that 70% of segregation was due to segregation among school districts (Clotfelter, 1998). Additionally, a Connecticut Supreme Court ruling found that the way in which school district boundaries in the case were drawn was unconstitutional because they were the major cause of segregation within the state (Eaton, 2007). Both legally and politically, designing policies to address cross-district segregation is challenging. Yet in the South, countywide districts encompassed much of the metropolitan areas and contributed to lower levels of school segregation (Frankenberg & Lee, 2002; Orfield, 2001).

## WHY SEGREGATION MATTERS

The initial argument made in *Brown* about the "harms" of segregation focused largely on potential psychological costs to young people: Those who attend segregated minority schools are harmed in terms of their self-image, whereas those who are the "segregators" or who attended segregated White schools were also found to have a false sense of superiority. In addition, two Supreme Court decisions that paved the way for *Brown* by desegregating higher education relied on sociological evidence about the importance of access to professional networks as part of a graduate education. Since the mid-1950s, research on segregation has confirmed and extended these reasons as to how segregated schools deny their students equal opportunity. This can be divided into three categories: (a) the relation of segregated schools to important educational inputs, (b) cognitive outcomes for students, and (c) democratic outcomes for students.

In 1954 Harry Ashmore released a major study of schooling in the South that documented the persisting inequalities between the funding of "Negro schools" and White schools. Although the gap had closed, in some states schools with White students had three times the funding that schools educating Black students received. The relation between segregation and resource inequality is evident in several major ways. First, minority schools tend to have teachers with lower qualifications and fewer years of experience, both of which relate to lower student achievement. In addition, these schools have higher teacher turnover, particularly among White teachers who comprise the vast majority of the teaching force. Second, because of the relation between poverty and race, segregated minority schools are overwhelmingly likely to have a majority of low-income students (Orfield & Lee, 2007). This is important because research since the 1966 Coleman Report finds that being in classrooms with middle-class students has a powerful effect on student learning. Finally, segregated minority, high-poverty schools generally offer fewer advanced courses and other

college preparation opportunities (Solorzano & Ornelas, 2002). These schools may also have facilities that are inferior to schools serving more White and middle-class students.

**Cognitive Student Outcomes** More research has been focused on understanding the short-term effects on students who attend segregated schools, although recently there has been a shift to also examine long-term student outcomes as well. The bulk of research on short-term effects has examined how student achievement in segregated schools compares to that in desegregated schools. Some of the earlier studies found mixed or inconclusive results on student achievement—usually measured by test scores sometimes after only a year of partially implemented desegregation—although the general consensus is that there are at least modest benefits for Black students' achievement in desegregated schools. There was less focus earlier on the achievement of Latino students, due, at least in part, to the fact that most of the students "desegregated" were in the South, where there were few Latino students at the time. Most of the rationales for desegregation focused on the unequal opportunity for minority students, with less attention on White students. The few studies that have examined White student achievement concluded that as long as desegregated schools remained majority White, the achievement of Whites was not harmed.

With the development of new statistical techniques, more methodologically rigorous research has confirmed that minority students' achievement in segregated minority schools is lower (Hanushek, Kain, & Rivkin, 2006). Further, attending segregated schools is likely to result in lower track placement (Mickelson, 2001). Segregated minority schools have lower graduation rates. In fact, after controlling for other factors that might relate to lower graduation rates, the percentage of minority students in a school was a significant predictor of graduation rates (Swanson, 2004). In addition, attending racially isolated K–12 schools makes students less likely to attend and persist in higher education, even after controlling for factors such as students' standardized test scores (Camburn, 1990). High school and college diplomas are increasingly important for employment opportunities, which affect both the individuals who fail to attain these degrees as well as communities who will have a less-educated employment base.

**Noncognitive Student Outcomes** Much of the attention, particularly in legal opinions, assessing whether there are benefits to desegregated schools has focused on cognitive outcomes. However, evidence about noncognitive benefits of desegregated schools—psychological, sociological, and democratic—is more robust than that of cognitive outcomes.

In terms of psychological outcomes, several important findings have emerged in prior studies. First, desegregated schools help students to develop cross-racial understanding, which relates to reduced stereotypes and bias (Killen & McKown, 2005). Further, students are more likely to understand racial exclusion is harmful (Killen, Crystal, & Ruck, 2007). Importantly, these gains can only be realized as a result of intergroup contact—which is limited in segregated schools—and the benefits are most significant at early ages before the formation of stereotypes (Hawley, 2007). These outcomes are particularly important because the development of racial stereotypes can affect decisions students make as adults, such as their interracial tolerance and their willingness to live and work in mixed-race settings. In addition, racial stereotypes can affect the achievement of students who perceive themselves as the object of such stereotypes as compared to students who are unaware of stereotypes (Steele & Aronson, 1995).

One of the early arguments for desegregation was the access to networks that minority students lacked in segregated schools. This was particularly evident in the *Sweatt v. Painter* (1950) and *McLaurin v. Oklahoma* (1950) Supreme Court decisions, in which the justices noted that without access to professional colleagues and the reputation of graduate schools, future professional opportunities were likely to be limited for minority students. Likewise, in elementary and secondary schools in particular, networks can be important in helping students think about attending college and know what preparation is important. In addition, the reputation and alumni connections that high schools have with selective colleges and employers are valuable benefits for students who attend such schools. When minority students lack access to such networks because they attend poorly resourced, segregated minority schools, their postgraduate opportunities are more limited solely as a result of the school they attended.

More recent literature has described a democratic or perpetuating effect of attending desegregated schools. As opposed to the other benefits described previously, these accrue to students of all racial backgrounds that attend racially diverse schools. Studies examining the "perpetuation effects" of desegregated schools suggest that Black students who attend desegregated schools are more likely than their peers who attend segregated minority schools to live and work in desegregated environments as adults (Wells & Crain, 1994). This pattern reflects two mechanisms: First, attending diverse, majority White schools allows students to overcome their fears of such institutions, and second, they have access to information about diverse opportunities. Research also suggests that students of all racial/ethnic backgrounds attending diverse high schools are more likely to report that they would feel

comfortable living and working in desegregated settings later in life and may have more civic engagement than peers attending segregated schools (e.g., Yun & Kurlaender, 2004). In addition, communities with more thoroughly desegregated schools are likely to experience more integrated neighborhoods. All of these findings point to the conclusion that desegregated schools are more likely to result in desegregated experiences for both students and communities, which are important preparation for citizenship in a pluralistic, multiracial society.

**Structuring Desegregation** Nearly all the research discussed thus far has focused on segregation at the school level. Although desegregation is important, one expert panel noted that it is only when two (or more) racial groups of students are in a school that the actual process of desegregation, sometimes called *integration*, begins (Hawley et al., 1983). Within-school structures and practices matter, however, as to whether these benefits of desegregated schools accrue to students. In 1954, Harvard psychologist Gordon Allport published *The Nature of Prejudice.* In it, he described his theory of intergroup contact and specified four conditions (equal status for all groups, common goals, no competition among groups, and authority sanction for intergroup contact) that were necessary to fully realize the benefits of contact with people of other groups. A meta-analysis of five decades of research supports the importance of intergroup contact in reducing stereotypes and finds that gains are stronger when the conditions are met (Pettigrew & Tropp, 2006).

Despite the importance of intergroup contact, structures inside schools often segregate students *within* schools even if they are desegregated at the school level (Mickelson, 2001). In addition to preventing interracial exposure, such within-school segregation often disproportionately exposes minority students to novice teachers (Clotfelter, Ladd, & Vigdor, 2005) and contributes to a persistent racial achievement gap (Burris & Welner, 2007). In the early 1970s, the federal government passed a desegregation assistance law to help retrain teachers for desegregated schools and to conduct research to understand what strategies worked best in diverse schools. There is considerably less research focus on how to best structure desegregated schools despite the growing racial complexity of the student enrollment (see Frankenberg & Orfield, 2007).

## FUTURE OF SEGREGATION AND SEGREGATION RESEARCH

School segregation research is likely to be shaped by two significant trends: demographic and legal changes. The country is rapidly diversifying, and, by the middle of the 21st century, public schools will have a non-White majority student body, a reality that has already occurred in 10 states (Orfield & Lee, 2007). In many states there are racially changing, complex school contexts (Frankenberg, in press). These new school contexts require research to help teachers and administrators understand how to structure schools in ways that will enhance the learning and social outcomes for all students.

In addition, in 2007 the Supreme Court (in *Parents Involved in Community Schools v. Seattle School District No.1* and *Meredith v. Jefferson County Board of Education*) ruled that commonly used student assignment plans designed to achieve racial integration were illegal. This decision portends a number of important avenues for investigation. First, educators and administrators must understand the possible consequences of abandoning race-conscious voluntary plans. Second, it is important to understand where there are successful race-neutral plans, under what conditions these plans are successful, and how they could be replicated. Third, given the skepticism by Supreme Court justices about the importance of racially diverse schools and the harms of segregated schools, there continues to be the need to research—and compellingly communicate research findings—on these topics.

Thus, whereas research will continue to be informed by social reality (e.g., the persisting high levels of segregation in major urban centers), it is quite likely that the study of school segregation will continue to be influenced by legal and policy decisions to understand their consequences and help inform future policies.

**SEE ALSO** Volume 1: *Academic Achievement; Neighborhood Context, Childhood and Adolescence; Policy, Education; Racial Inequality in Education; School Tracking; Socioeconomic Inequality in Education; Stages of Schooling;* Volume 2: *Segregation, Residential.*

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***Erica Frankenberg***

# SELF-ESTEEM

Few concepts in the social and behavioral sciences have excited as much interest and spawned as many major research programs dedicated to defining its antecedents and consequences as has self-esteem. This concept is regarded by many social theorists and researchers as a central construct in explanations of human social behavior, over the life course and as a concept that must be attended to in the design and implementation of planned social interventions that are dedicated to the amelioration of individual and societal outcomes (Kaplan, 1986; Kernis, 2006; Mecca, Smelser, & Vasconcellos, 1989).

## DEFINITION AND MEASUREMENT OF SELF-ESTEEM

In spite of the central position accorded to self-esteem in theories and research about human social behavior, there are widely divergent positions regarding how to define this concept. Definitions of self-esteem usually involve one or more of four classes of self-referent responses: self-cognition, self-evaluation, self-feeling, and self-enhancing or self-protective mechanisms. *Self-cognition* refers to processes whereby the person conceives of, perceives, or otherwise thinks about him or herself. *Self-evaluation* refers to the process of judging one's self to be close to or distant from more or less salient personal values. *Self-feeling* refers to the more or less positive/negative affective (emotional) responses that are evoked by the ways in which the person thinks about and evaluates him or herself. *Self-enhancing* and *self-protective mechanisms* refer to the person's responses that allow the individual to think about him or herself in more favorable terms, to evaluate and feel more positively about him or herself, and to forestall negative thoughts, evaluations, and feelings about him or herself. Recognizing the conceptual and empirical interrelations among these classes of self-oriented responses, self-esteem is defined here in terms of all four classes: Self-esteem refers to the more or less

intense emotional responses that are evoked by self-conceptions and self-evaluations of being close to or distant from relatively important self-values and that motivate responses that are intended and may function to improve positive self-esteem or self-concepts, -evaluations, and -feelings.

Self-esteem may refer to one's momentary situation or to characteristic responses that transcend time and situations for the individual. In the latter case, regardless of the momentary situation, the person generally or chronically tends to conceive of and evaluate him or herself in terms of positively (or negatively) valued qualities, behaviors, and circumstances and to respond with positive (or negative) self-feelings. The stability of level of self-esteem may be accounted for by the stability of life's circumstances (the person continues to evoke rejecting responses from significant others in response to stable socially disvalued qualities), internalized attitudes, or, perhaps, genetic influences. Such stable, characteristic, or chronic levels are often referred to in terms of trait self-esteem.

In the case of momentary (state) or current self-esteem, level of self-esteem is variable and depends on the current circumstances in which the individual finds him or herself. In one social situation the person's attributes and behaviors might evoke accepting responses from significant others that stimulate positive self-conceptions, self-evaluations, and self-feelings and motivate attempts to reproduce these circumstances, and the same or other attributes in other social situations might evoke rejecting responses and concomitant negative self-conceptions, self-evaluations, and self-feelings that motivate responses that might forestall such experiences (e.g., avoidance of those who offered rejecting responses). Trait (characteristic, general) self-esteem and state (momentary, current) self-esteem are mutually influential. Individuals with low trait self-esteem may respond differently to current self-devaluing circumstances than individuals with high trait self-esteem. If a person feels like he or she has had a successful life, a momentary failure would be less traumatic.

Trait or state self-esteem may be based on more or less global (e.g., a worthy person) or specific (e.g., a good student) self-evaluations. A positive global self-evaluation generally is believed to be the most important basis for high self-esteem (Kaplan, 1986).

Defining self-esteem as a trait rather than a state, or in more general rather than specific terms, has implications for measuring self-esteem. The methodologies must be able to permit conclusions regarding cross-time and trans-situational versus current and situational-specific self-conceptions, self-evaluation, and concomitant self-feelings (how does one usually feel about one's self versus how does one feel about one's self now in this situation) and between more general versus more specific self-conceptions, self-evaluations, and concomitant self-feelings (I am a person of worth versus I am a good student). Further, because traditional self-report measures of self-esteem are vulnerable to distortions motivated by the need to perceive one's self in positive terms or to appear to others as if one perceives one's self in such terms, attention has been turned to the measurement of self-esteem in terms of nonconscious/automatic ways that presumably circumvent such enhancement-motivated distortions.

Such implicit, or "true" self-referent responses might be gauged by asking people to respond to stimuli that are associated with, but do not directly reflect, significant aspects of the self (Koole & Pelham, 2003). Unfortunately, measures of implicit self-esteem are more easily measured in experimental laboratory studies than in large-scale in-community studies. Such studies require alternative methods to determine that responses to self-evaluative scales are valid indicators of the individual's true feelings about him or herself. Among the self-report scales that are frequently used in research on self-esteem is Rosenberg's (1965) Self-Esteem Scale.

## SOCIAL ANTECEDENTS OF SELF-ESTEEM

The need for self-esteem is a fundamental human motive that is grounded in even more basic needs related to human survival and the interdependent social relationships that facilitate such survival (Kaplan, 1986). The need for self-esteem is experienced as the distressful emotions that are evoked when people perceive threats to their self-values. Such threats arise developmentally or contemporaneously when individuals anticipate, recall, or currently experience the failure to achieve important goals, evoke positive evaluations from significant others, or in general fail to approximate the self-evaluative criteria according to which they judge themselves to be worthy.

The self-values that comprise the hierarchically and situationally organized criteria for positive/negative self-evaluation may include the ability to perform tasks (contributing to a sense of competence), the ability to influence the environment (perhaps manifested as a sense of autonomy), likeability (perhaps manifested in the evocation of positive responses from significant others), leadership (reflected in the ability to influence others to adopt one's goals), or any number of other criteria. These values are hierarchically organized in the sense that if one could only approximate one value at the cost of failing to approximate another value, precedence would be given to the value that contributed more to one's overall sense of self-esteem. The values are situationally organized in the sense that different values are relevant to different situational contexts. On the battlefield, values relating to

loyalty to one's comrades or acting courageously might be salient. In the family, values relating to the ability to give and receive love and to care for those who are dependent might be salient whereas the battlefield-related criteria might be irrelevant. The experiences that contribute to one's negative (positive) self-feelings and, hence, to the need for self-esteem include past developmental circumstances and the current situation.

Other people provide important information to the individual that keys into the person's self-evaluation. Although it is not otherwise apparent as to how successful we are in meeting our self-evaluatively relevant goals, other people provide clues to how well we are doing in this regard. People may offer expression of approval or disapproval by virtue of their evaluation of our performance. Further, our own perception of what we accomplish may be measured against our perceptions of what others like us have accomplished. That is, others provide a normative standard against which we evaluate our own achievements. Other people's responses to us are important to our self-evaluation also insofar as evoking positive responses is intrinsically valued as a criterion for self-evaluation. That is, we think well of ourselves if others like and respect us. One of the criteria for high self-esteem is the self-perception of being liked and respected by others who are highly regarded by us.

It is in the context of emotionally significant interpersonal relationships that individuals develop characteristic levels of self-esteem and contemporaneously respond to what are perceived as threats to one's self-esteem. In the context of relations with parents, siblings, friends, children, spouses, and romantic partners, these interpersonal transactions assume great significance for how one perceives, evaluates, and feels about one's self.

Parenting style, for example, has a profound impact on children's level of self-esteem (DeHart, Pelham, & Tennen, 2006). Young adult children who had more nurturing parents tend to have higher implicit self-esteem. Experiences in secondary social institutions as well contribute to level of self-esteem. Individuals who identify with a positive religious identity tend to display higher self-esteem (Keyes & Reitzes, 2007), particularly during certain life transitions such as retirement, when a religious identity may serve to replace an important loss of some other identity (i.e., worker). Within medicine, better functional health (the ability to perform various activities) anticipates greater levels of self-esteem over a 2-year period (Reitzes & Mutran, 2006); and the success of the therapeutic experience is expected when the patient is able to perceive that the therapist truly places a high value on the patient's worth (Beutler et al., 2004).

In the workplace, a study of abusive supervisory patterns on subordinate's self-esteem (Burton & Hoobler, 2006) confirmed that individuals in the abusive supervision condition manifested lower levels of self-esteem than individuals in a neutral supervision condition. Finally, the relevance of political values is apparent from the observation that for those whose beliefs suggest that socioeconomic status reflects talent and effort, the achievement of higher levels of socioeconomic status is more likely to contribute to one's self-esteem than for those who believe that socioeconomic status is merely a reflection of one's initial placement in a social structure and does not reflect one way or the other on a person's merit (Malka & Miller, 2007).

Experiences of failure/rejection or success/acceptance will affect level of self-esteem depending on the effectiveness of the person's self-enhancing or self-protective responses to the experiences. These mechanisms include increased efforts directed toward achieving valued attributes or performing valued behaviors, distorting one's self-perceptions in a positive direction, changing one's values to give higher priority to those that are achievable and lower priority to those values that are more difficult to achieve, and directly counteracting negative self-feelings by repressing or suppressing them or through the use of mood-enhancing substances. Under some conditions, deviant behaviors that symbolize rejection of the society that engendered low self-esteem serve to decrease self-rejecting attitudes (Kaplan, 1975, 1980). Feelings of being rejected may be reduced by hostility toward the rejecting partners (Murray, Holmes, MacDonald, & Ellsworth, 1998), in effect discrediting the source of the rejection. Overly positive perceptions of acceptance in the context of peer relationships is effective in increasing feelings of self-worth, whether examining a normative sample or a peer-rejected group of grade school students (Kistner, David, & Repper, 2007).

A common mechanism that is employed in the face of probable failure to approximate one's self-evaluatively relevant goals is self-handicapping (Rhodewalt & Tragakis, 2002). This mechanism involves self-imposing barriers to success that would provide self-justification for excuses for failure. By not exerting effort, one can blame one's failure on the lack of effort rather than on any limitations on one's own ability. However, individuals who base their self-esteem on particular conventional values will ordinarily devote greater effort to achieving those values.

## SOCIAL CONSEQUENCES OF LOW SELF-ESTEEM

Threats to a person's self-esteem have important positive and negative consequences for the functioning of interpersonal relationships and group memberships. For those who identify with a group, devaluation of the group will lead to

increased in-group bias and a subsequent increase in social self-esteem. For individuals whose position in the group is insecure (neophytes, those who are ostracized or peripheral) a common reaction is increased conformity, or at least increased impression management of conforming to group norms (Jetten, Hornsey, & Adarves-Yorno, 2006). Lower status group members are more likely to present themselves as conforming than higher prestige group members, particularly when they are addressing an in-group audience and when they perceive their responses as being made public.

In some groups, paradoxically, conformity may demand the appearance of independence or being a rebel. In such groups, also, one would expect those most in need of group acceptance (that is, new, rejected, or peripheral members) to be most likely to make public displays of being nonconformists. Of course it is to be expected that conformity as a mechanism would be utilized only when the individual feels committed to the group and expects conformity to result in desirable rewards (including recognition) and when no alternatives are offered that lead one to anticipate more self-enhancing outcomes. Absent these contingencies, the loss of motivation to conform to the group and the disposition to seek alternative (perhaps deviant) response patterns becomes a real possibility. These principles play out in a variety of ways in interpersonal and group contexts.

In romantic relationships, low self-esteem on the part of one of the partners may have destructive implications with regard to the maintenance of the relationship. These individuals disbelieve that their partners hold positive attitudes toward them and frequently impute negative attitudes, a self-protective device by low self-esteem individuals that permits them to reject others before they themselves are rejected. Although low self-esteem individuals' partners may initially have positive attitudes toward them, because of their oversensitivity to rejection and their self-defensive responses to expectations of rejection, these individuals create the rejecting attitudes that previously did not in fact exist.

The mechanism of conformity to group norms as an adaptation to self-threatening circumstances has important implications for intergroup behavior because it often takes the form of public displays of derogation or deleterious action against groups that are regarded as competitors or otherwise in conflict with one's own group. It is the individual who has a tenuous relationship with the group rather than the longstanding member that feels the need to derogate outgroups as a mechanism for achieving acceptance within the group (Noel, Wann, & Branscombe, 1995).

As low self-esteem persons associate their self-derogation with participation in the conventional socio-normative system, it becomes increasingly likely that individuals will withdraw from participation in conventional social institutions and rather will adopt deviant patterns that offer alternative sources of self-esteem (Kaplan, 1975, 1980, 1986; Kaplan & Johnson, 2001). For example, lower levels of self-esteem during the university years predicted lower levels of work involvement and satisfaction and higher levels of unemployment, weariness, and negative attitudes toward (along with reduced accomplishment at) work (Salmela-Aro & Nurmi, 2007). In the educational realm, studies of adolescents followed into adulthood demonstrate that low self-esteem during adolescence is associated with a greater probability of dropping out of school, and, of course, being less likely to attend a university, findings that are significant because they are frequently observed after controlling for the effects of socioeconomic status, depression, and IQ, among other variables. At the same time, long-term studies confirm that adolescents characterized by low self-esteem predicted higher levels of criminal behavior during adulthood.

To some extent the loss of motivation, and perhaps ability, to conform to conventional role obligations might be accounted for in part by the association of low self-esteem with poor physical and mental health outcomes. For example, over a 2-year period, low self-esteem was associated with decreases in functional health (i.e., the ability to perform various tasks; Reitzes & Mutran, 2006).

## LIFE COURSE AND SELF-ESTEEM

The empirical literature clearly suggests that the level, stability, and even capacity for self-esteem is contingent on stage in the life course and its concomitants. Level of self-esteem has been observed to change over the life course. The level of self-approval is relatively high during early childhood but is somewhat lower during middle and late childhood. The level apparently declines during the transitional period between childhood and adolescence. During adulthood, level of self-esteem seems to increase during the latter part of the third decade of life (the 20s) and in the 50s and 60s. However, self-esteem appears to decrease among adults ages 70 or older (Tevendale & DuBois, 2006). More specifically, global self-esteem tends to decrease during adolescence and gradually increase during the third decade of life (between 20 and 30; Kling, Hyde, Showers, & Buswell, 1999). A follow-up of individuals between the ages of 16 and 26 over a 20-year period reported an average increase of self-esteem (Roberts & Bengtson, 1996). Individuals with lower self-esteem ages 18 to 25 manifested a greater increase in self-esteem over this period (Galambos, Barker, & Krahn, 2006). Improvements in self-esteem correlated with receiving greater social support and experiencing less unemployment.

Amount of change/stability in self-esteem, as opposed to change in level of self-esteem, also varies throughout the life course. Amount of change (low stability) tends to be relatively great during childhood. However, stability tends to increase between adolescence and adulthood and decreases between the adult years and old age (Trzesniewski, Donnellan, & Robins, 2003).

The developmental basis for a global sense of high or low self-esteem appears to emerge at an earlier age (3 years) when children begin to use self-referent words "I" and "me" in sentences suggesting that they have particular competencies such as knowing their letters or being a "big boy/girl." Implicit in these statements is the sense that these competencies have evaluative significance. However, very young children do not have a self-conscious concept of global self-esteem that they can verbalize. Nevertheless, a sense of high or low self-esteem becomes manifest in behaviors. Thus, among children ages 4 through 7, children with high and low self-esteem were said to be distinguished by whether or not they showed exploration, confidence, curiosity, and so on (Harter, 1999). Around the age of 8, however, children appear to be able to reflect on themselves as being globally more or less self-accepting. It is around this age that it is possible to conceive of one's self and to communicate a self-conception that is less than positive. The ability to form such global self-evaluations is facilitated by the development at this age of the capacity to compare one's self to a self-evaluative standard and to take the role of another person and perceive one's self from the other person's point of view.

Influences on low or high self-esteem are associated with stage in the life course. Some social changes that are predictably likely to occur at particular stages in the life course may influence level of self-esteem. Thus, the transition from elementary school to middle school appears to adversely affect self-esteem (Seidman et al., 1994). Whether this decrease in self-esteem associated with transition is due to the disruption of normal adaptive/coping/defense mechanisms or increased expectations on the individual that the individual has problems fulfilling or is accounted for by other correlates of the transition remains to be determined. In any case, stage of the life course does appear to moderate level of self-esteem and must, of necessity, be considered in any attempt to fully understand the nature, antecedents, and consequences of processes related to self-esteem.

**SEE ALSO** Volume 1: *Body Image, Childhood and Adolescence; Identity Development;* Volume 3: *Self.*

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## SEX EDUCATION/ ABSTINENCE EDUCATION

People learn about their sexuality throughout their lives and from a multitude of sources, including peers, family, religious institutions, online sources, commercial advertising, self-help books, television, and popular music and films. Despite the varied sources and moments at which people glean lessons about sex and sexuality, researchers, educators, policy makers, and community members concerned with sex education routinely focus on school-based instruction for adolescents. This focus often forecloses attention to lifelong learning about sexuality. Sexuality exists in all stages of the life course, and sex education thus has the potential to be a lifelong pursuit.

Most school-based sex education in the United States promotes a narrow conception of not only *when* people learn about sex and sexuality but also *what* they need to learn. Sex education—both policy and practice—routinely approaches sexual health as an issue of reproductive anatomy, disease and pregnancy prevention, and sexual abstinence. The narrow scope of sex education has a long legacy entrenched in moral panics, social purity movements, and disease prevention. This focus obscures other issues that many consider central to sexual well-being, including mental and emotional health, spiritual growth, and a sense of sexual agency.

At the beginning of the 21st century, the debate over sex education in the United States is particularly contentious. Proponents of abstinence-only sex education argue for instruction that insists on the value of abstaining from sexual activity outside of heterosexual marriage. Such definitions of sexual well-being deny lesbian, gay, and bisexual people and other sexual nonconformists access to information that promotes their health. Those advocating comprehensive sex education argue that schools must provide young people with lessons about pregnancy and disease prevention; lesbian, gay, and bisexuality; abortion; and masturbation to address the reality that many people are sexually active outside marriage. Conflicts over school-based sex education are about much more than whether and what young people should learn about sex and sexuality in school; rather, these debates address fundamental issues about gender norms, family formations, sexual possibilities, and life trajectories.

### SEX EDUCATION IN THE 20TH CENTURY

Sex education emerged as a public concern in the United States in the late 1800s, when the YMCA, YWCA, and American Purity Alliance, organizations based on Judeo-Christian principles, hosted sex-related panels and lectures. In the early 1900s, U.S. educators and advocates formed organizations to address sexual morality and hygiene, including the American Society of Sanitary and Moral Prophylaxis (founded in 1905), the American Federation for Sex Hygiene (1910), and the American Social Hygiene Association (1914). These groups focused on the dangers of "social evil" especially within the context of venereal diseases. During World War I, policy makers grew concerned that soldiers would return from overseas with venereal diseases such as syphilis and gonorrhea and thus endanger U.S. morality and well-being. In response, organizations such as the American Social Hygiene Association ran a social marketing campaign that brought moral and physical fitness together with the aim of preventing sexually transmitted infections (STIs). During this period, medical information about sexually transmitted diseases (STD) improved and popular media about sexuality increased. As sexuality information escalated in public spaces, parents and teachers worried about adolescents' access to this information. Regulating sex education within schools promised to control how youth talked about sex. Therefore, by the end of the 1920s, consensus was emerging that sex education was primarily schools'—and not families—responsibility (Rosow and Persell, 1980).

***Abstinence.*** *A billboard in downtown Baltimore promotes teen abstinence.* AP IMAGES.

In 1964 the Sexuality Information and Education Council of the United States (SIECUS) formed to promote access to sexual health information. SIECUS founder Mary Calderone explained, "We put sexuality into the field of health rather than the field of morals" (Irvine, 2002, p. 27). SIECUS departed from earlier hygiene groups that combined sexuality and morality rather than sexuality and health. SIECUS continues to be a national organization invested in advocacy for sexual health, sexual rights, the defense of comprehensive sex education, the promotion of sexual pleasure, and the eradication of sexual guilt.

The emergence of the HIV/AIDS epidemic in the 1980s strengthened the link between sexuality and health and had a broad and significant impact on sex education. HIV heightened the fear that lives were at stake in the debate over sex education. For comprehensive-education supporters, HIV provided further evidence that young people needed to be equipped with the tools to fight sexually transmitted diseases. For abstinence-only supporters, HIV affirmed that sexual expression is appropriate and safe only within monogamous, faithful, heterosexual marriage (Irvine, 2002).

## CONTEMPORARY DEBATES OVER COMPREHENSIVE AND ABSTINENCE-ONLY SEX EDUCATION

The fight over abstinence-only sex education was well underway before the emergence of the HIV epidemic. In 1978 Senator Edward Kennedy (Democrat-Massachusetts) sponsored the Adolescent Health Services Act, which aimed to address a perceived epidemic of teen pregnancies by funding comprehensive sex education, contraceptive services, and other family planning and reproductive services. Objecting to the Adolescent Health Services Act and to broad shifts in gender and sexual norms, conservatives argued that federal funding should promote sexual abstinence among young people, not suggest that they might engage in sexual activity safely.

Congress passed the Adolescent Family Life Act (AFLA) in 1981. AFLA, also known as the "chastity law," codified and funded a standard of sexual abstinence. The legislation promoted regulation and conventional modesty among youth by funding exclusively abstinence-only education and denying funding to state and local programs that discussed, counseled, or provided abortion.

The 1996 Personal Responsibility and Work Opportunity Reconciliation Act (what many know as "welfare reform") included an amendment that required that programs receiving federal funding adhere to an eight-point definition of "abstinence education" as instruction that asserts mutually faithful, monogamous marriage as "the expected standard of sexual activity" for all people.

All of this legislation contributed to a sustained federal effort to fund education that reasserts conventional gender and sexual norms and morality. In the 1990s and 2000s, conservatives have been unabashed in their aim to reassert heterosexual marriage as fundamental to a healthy society and to establish a taken-for-granted idea that sexual abstinence is the most, if not only, appropriate choice for young people outside of heterosexual marriage. This "common sense" emerged despite consistent support for comprehensive sex education that presents abstinence as one of many ways to prevent sexually transmitted infections and pregnancies and which discusses the benefits, failure rates, and side effects of contraceptive methods. Such instruction usually affirms the value of sexual abstinence in pregnancy and disease prevention. However, comprehensive sex education also argues that, because some youth are sexually active before leaving high school and before marriage and that non-heterosexual youth are invisible in education that relies on marriage, schools must provide sex education that equips them to engage in consensual and safe sexual activity.

## SEX EDUCATION IN CONTEXT: CULTURE, CURRICULA, AND CLASSROOMS

Debates and controversies over sex education are about much more than whether, when, and what young people should learn in school about sex and sexuality, and the effects of sex education extend well beyond whether students learn how to prevent pregnancies and disease. Community struggles over sex education policy in the United States reflect, resist, and affirm broad social conflict. Sex educators offer lessons that aim to protect young people from harm but that may have little effect. Further, day-to-day practices in sex education classrooms reflect and reproduce persistent social inequalities such as gender norms, family structures, and sexual expectations.

## SEXUAL SENSIBILITIES: SEX EDUCATION AND SHIFTING SOCIAL NORMS

Varying contexts of family values, cultural proscriptions of adolescent sexuality, and religion all have a significant impact on sex education, adolescents' ability to navigate their sexuality, and the role of sexuality in the life course. Amy Schalet's research (2004) on the construction of adolescent sexuality in the Netherlands and the United States reveals the significant role of culture in sexual health. Schalet found that Dutch parents normalize and accept adolescent sexuality whereas U.S. parents dramatize, deny, and fear adolescent sexuality. While Dutch parents see adolescents as sexual agents capable of healthy sexual decision-making and loving relationships, Americans distrust adolescents' ability to navigate sexuality and deny their ability to foster love-based relationships. The U.S practice of denying adolescent sexuality makes it harder for adolescents to gain access to contraceptives, abortion, and relevant sex education material. Young people in the United States also find it difficult to act on healthy sexual choices.

This culture of denial and proscription is also evident in adult talk about young people's sexuality and sex education. Janice Irvine (2002) researched the role of emotions in the politics of sex education debates to unravel the power of emotion and language in the culture wars of sexuality. Irvine realizes that *how* people talk about sex has significant implications on sexual culture. These adult-driven debates ignore adolescents' voices; messages of fear illicit strong emotional responses that further compel abstinence-only support while masking the benefits of comprehensive sex education.

## INSTRUCTIONAL IMPACT: EVALUATION RESEARCH AND SEX EDUCATION

Despite proponents' claims that abstinence-only sex education contributes to individual, familial, and social well-being, reports consistently confirm that no studies meeting scientific standards have demonstrated that abstinence-only education reduces teen pregnancies or delays first intercourse (Kirby, 2001). Indeed, few systematic evaluations exist of sex education, broadly defined, and, in particular, of abstinence-only sex education. Those evaluations that are available indicate that participating in abstinence-only programs does not increase the likelihood that youth will abstain from engaging in sex or delay sexual initiation. Some research suggests that many young people who participate in abstinence-only education and who take "virginity pledges" eventually do become sexually active before marriage, are less likely to use condoms at first intercourse, and thus are ultimately at greater risk of contracting an STI.

This finding contradicts the widespread belief that talking with youth about sex education will increase their interest in having sex. Indeed, research shows that participants in comprehensive sex education wait longer to have sex, have fewer sex partners, and use condoms and other contraceptive methods at significantly higher numbers as compared to students not in comprehensive sex

## VIRGINITY PLEDGE

Virginity pledges are promises to remain sexually abstinent until marriage. Pledgers tend to be school-aged, evangelical Christians, and from conventional families. Many—though not all—pledgers promise abstinence through formal organizations such as The Silver Ring Thing and True Love Waits. At the turn of the 21st century, virginity pledging, like abstinence-only sex education, contributes to a broad movement to reassert conventional gender and sexual norms.

Definitions of virginity are elusive, often making it unclear precisely what a pledger is committing to. Some believe that engaging in penile-vaginal intercourse constitutes the loss of one's virginity; for others, remaining abstinent may mean avoiding kissing, oral sex, or anal sex. Some assert the possibility of "secondary virginity," in which a person pledges to no longer engage in sexual activity and to remain abstinent until marriage.

Pledgers may postpone sex, but, having had little instruction in disease and pregnancy prevention, they are less likely to use a condom during their first sexual experiences. Identity appears important to pledging's effectiveness: Pledgers successfully delay sexual activity as long as committing to abstinence remains nonnormative among their peers—too many or too few pledging peers results in a less socially significant and therefore less effective pledge.

education. The curricula most effective in reducing teen pregnancies focus on contraceptive use and sexual behavior while also highlighting abstinence as the safest choice to avoid pregnancies and STIs (Kirby, 2001).

These and other findings in the evaluation research have become increasingly politicized. Critics of abstinence-only policies have called on the federal government (a) to desist funding for curricula that contain medical and scientific inaccuracies and (b) to conduct rigorous scientific evaluations of the curricula's effectiveness. These calls grew only louder in 2006, when the nonpartisan Government Accountability Office (GAO) released a report on abstinence education, conducted at the request of Democratic members of the House of Representatives and Senate. According to the GAO, the U.S. Department of Health and Human Services had not required grantees to review their curricula for scientific accuracy or to conduct scientifically sound evaluations of their programs' effectiveness in meeting their own goal of promoting sexual abstinence among young people. A 2004 report sponsored by Representative Henry Waxman (Democrat-California) demonstrated that abstinence-only curricula contain scientific errors (including false information about contraceptives and the risks of abortion), distort distinctions between religion and science, and provide stereotypical depictions of girls' and boys' behavior.

As of late 2007, approximately one quarter of all states have refused federal funding for sex education that requires abstinence-only curricula. This is a dramatic change from 2006, when only four states rejected this funding.

### INSIDE THE CLASSROOM: SEX EDUCATION AND THE REPRODUCTION OF SOCIAL INEQUALITY

While states' refusal of abstinence-only funding is a significant development in the debate over sex education, legislative and administrative decisions are only brief moments in a process of curricular negotiation and contestation. Abstinence-only and comprehensive curricula are never regimes of absolute control. Teachers adapt administration priorities to meet their own instructional aims, and once inside the classroom, negotiations continue as students receive, resist, and revise their teachers' lessons.

Much of the research on sex education focuses on hidden lessons on gender and female sexuality. In one of the earliest and still most influential publications on sex education, Michelle Fine (1988) argued that discourses of female victimization and (im)morality dominated school-based sex education. Fine pointed to a "missing discourse" that recognizes girls' and young women's sexual desires and pleasures. This discourse emerges in whispers from students, but teachers and the formal curriculum routinely mute talk of female sexuality as a site of agency and pleasure, contributing to the broad educational, intellectual, and political disempowerment of girls and women.

This muting continues in the wake of U.S. abstinence-only legislation. Jessica Fields found that whereas abstinence-only lessons may be the formal mandate in sex education courses, multiple curricula abound in a single class meeting. Formal, hidden, and evaded lessons compete for students' attention, and all help to determine the sex education students receive. These lessons are consistently inflected with social differences and inequalities. For example, teachers affirm sexist understandings of sexuality when they present lessons that officially promote open sexual communication while also casting boys and men

as sexual aggressors and assigning girls and women responsibility for maintaining sexual boundaries. Often, teachers are complicit in perpetuating racist and able-ist depictions of bodies and sexuality when they present exclusively white, able-bodied, and idealized images of sex organs and anatomies.

### SEX EDUCATION'S FUTURE AND POTENTIAL

Building on the work of Michelle Fine, feminist researchers have explored the "whisper" of desire in sex education, finding in these whispers not only the hint of female sexual agency, but also the potential for transformative sex education, and a call for broad social change. Sometimes those whispers occur outside the classroom—in school-based health clinics, in online chat rooms, or over dinner with a trusted adult, for example. Other times those whispers occur inside the classroom during, for example, a discussion of orgasms, clitorises, or heterosexual intercourse. In these moments, the discourse of desire and the challenge to social inequality so often missing from sex education interrupts the prevailing talk about female sexuality as victimization, violence, and individual morality. In these moments, sex education becomes more than an opportunity to teach the skills and norms expected of young people as they move toward adulthood. Instead, sex education becomes a site in which young women and others can struggle against disadvantage and come to a sense of entitlement. This sensibility is crucial to a range of conventional health outcomes—for example, avoiding unwanted pregnancies, STIs, and sexual coercion. It is also entangled with the political, intellectual, and social entitlement that is central to people thriving throughout the life course.

Researchers, advocates, and educators with a critical perspective on sexuality, education, and youth pursue inquiry that "suspends the 'givens' of adolescent sexuality" (McClelland and Fine 2008, p. 67). These givens include the commonsense assumptions that abstinence is the most desirable outcome in young people's sexual lives; that young people are naturally and best heterosexual; that girls are passive in their heterosexual relationships; that boys are inevitably sexually aggressive; that sex education's promise and effects lie primarily in preventing pregnancies and disease and in delaying sexual initiation; and that learning about sex and sexuality ends once we leave adolescence.

Intersections of religion, public policy, school-based education, and media all inform youth and adults of the potential benefits and harms of sexuality. Locating sex education in classrooms that uncritically promote gender and sexuality conventions limits sex education's potential. Sex education represents an opportunity to promote understandings of sexuality as a lifelong process; affirm lesbian, gay, bisexual, and heterosexualities; and acknowledge that individuals learn about sex and sexuality across institutions and across their lifetimes.

**SEE ALSO** Volume 1: *Dating and Romantic Relationships, Childhood and Adolescence; Sexual Activity, Adolescence; Transition to Parenthood.*

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***Kathleen Hentz***
***Jessica Fields***

## SEXUAL ACTIVITY, ADOLESCENT

"It started with a chair," says Juno in the opening line of the 2007 movie of the same name. As quickly becomes apparent, "it" refers to sex between two teenagers that in this case leads to pregnancy, birth, and finally an

awakening of what love is all about. In contrast, a very different sequence of life course events is laid out in the traditional children's jump rope rhyme: "first comes love, then comes marriage, then comes a baby in a baby carriage." The chain of events portrayed in Juno, however, in which marriage is not even mentioned, is the one that comes closest to typifying adolescent sexual behavior at the turn of the 21st century. It is also the sequence that continues to worry parents and policy makers alike.

## TRENDS IN ADOLESCENT SEXUAL BEHAVIORS

A range of excellent Web sites provide facts and figures pertaining to adolescent sexual behavior, including statistics on pregnancy, birth rates, contraception and sexually transmitted infections (STIs) (for example, www.cdc.gov/nchs; www.childtrends.org; www.guttmacher.org). Since the early 1970s many aspects of adolescent sexual behavior have undergone marked changes; an understanding of the historical trends helps to put current teen activities in context.

Beginning in the late 1960s and continuing throughout the 1980s, increasing proportions of teenagers had nonmarital sexual intercourse. This trend reversed during the late 1990s and into the early 21st century, however. Comparisons of data from the 1988 and 2002 National Surveys of Family Growth (NSFG) show that, whereas 60% of 15- to 19-year-old males in 1988 reported having had intercourse, by 2002 this had dropped to 46%. Girls showed a decrease over the same time period, from 51% to 46%. American teens also appear to be waiting longer to have sex. Whereas in 1995 19% of girls and 21% of boys said they had had sex by age 15, in 2002 the corresponding percentages were 13% and 15% (Abma, Martinez, Mosher, and Dawson, 2004).

Adolescents have always had sex, so why should current figures be of concern, especially given their downward trend? Despite the declines, close to half of American teens report having had sexual intercourse at least once, and roughly 1 in 7 initiated sex prior to age fifteen. Alongside moral disquiet that adolescent sexual behavior overwhelmingly occurs outside of marriage, risk of pregnancy and STIs also lie at the forefront of societal worries.

Looking at the glass half full, a steady drop in teen pregnancy rates from a high point in 1991 has paralleled declines in sexual intercourse among teenagers in the United States. So has the teen birth rate, which in 1991 stood at 62 births per 1000 15- to 19-year-old American girls, but by 2004 had dropped by one third to 41 births per 1000. Although social conservatives have credited much of the drop in teen pregnancy rates to abstinence education programs, the numbers show that improved contraception has been the principal player (Santelli, Lindberg, Finer, and Singh, 2007). Data from the 1995 and 2002 rounds of the NSFG placed the percentages of 15- to 19-year-old males who used contraceptives the most recent time they had sex at 82% in 1995 and 91% in 2002. Comparable figures for girls were 71% and 83%. Teens are increasingly using condoms, which provide the best protection from STIs, and the birth control pill and injectable hormonal methods such as Depo-Provera to prevent pregnancy. The number of adolescents who used two or more methods simultaneously over this time period also more than doubled, from 11% to 26%, reflecting a desire to protect against both pregnancy and STIs. Contraceptive use at first sex has also become more common. This is important because youth who use contraceptives at first sex are more likely to use them when they have sex later than are youth who do not, and consistent contraception is key to preventing pregnancy and STIs.

The same glass may also be seen as half empty, however, as close to one-third of American girls get pregnant by age 20—a figure that stands at just over 50% for Latina teens. More than four-fifths of teen pregnancies are unplanned and just under half of unintended teen pregnancies end in abortion. Of those teen pregnancies that are carried to term, the proportion of teen births that occur within marriage decreased from just under half in 1982 to less than 1 in 5 in 2002 as fewer unmarried pregnant teens chose to marry prior to giving birth, if at all. Further, despite significant declines in teen sex, pregnancy, abortions and births since 1991, U.S. teen pregnancy rates, birth rates, abortion rates, and rates of STIs remain among the highest in the industrialized world (Singh and Darroch, 2000; Darroch, Singh, and Frost, 2003). Although levels of adolescent sexual activity do not vary much across comparable developed countries such as Canada, Great Britain, France, Sweden, and the United States, American teens are more likely than their foreign counterparts to have sexual intercourse before their 15th birthday and to have two or more sexual partners in a year. They are also less likely to use contraceptives, especially the pill and other long-acting reversible hormonal methods that are the most effective at preventing pregnancy.

Youths who delay sexual initiation are less likely to regret the timing of their first sexual experience, and are less likely to be involved in coercive sexual relationships. Approximately 10% of first sexual encounters that occur prior to age 20 are reported by young women as involuntary or forced; for those who first have sex before age 15, the percentage is higher still. Early initiation of sex is also especially worrisome because young teens are less likely to use contraception at first sex and to use contraceptives

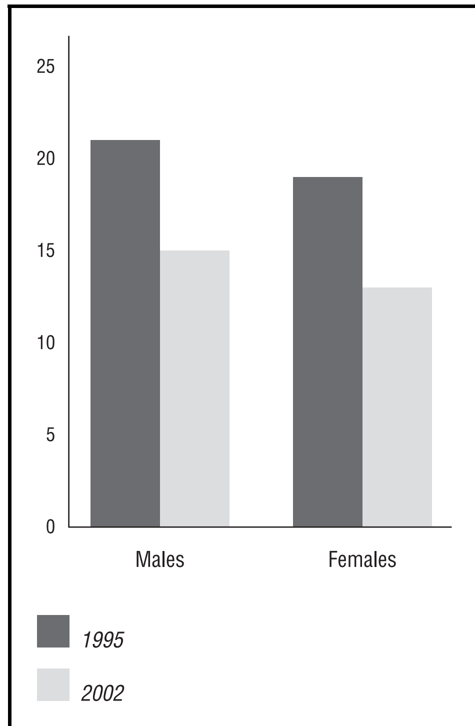


***Figure 1.*** *Percent of teens having had sex by age 15 years.* CENGAGE LEARNING, GALE.

consistently throughout their first relationship (Ryan et al., 2003). Although most teens who have had sex report none or only one sexual partner in the past year, close to 10% report four or more. Having more partners also is associated with a lower likelihood of contraception and a higher likelihood of acquiring an STI. According to figures published by Child Trends in 2006, young people between 15 and 24 years old account for almost half of all newly acquired STIs in the United States. Figures released by the Centers for Disease Control in 2008 show that at least 1 in 4 teenage girls had an STI.

Why might American teens have sex at an earlier age, have more partners, and use contraception less consistently than teens in other developed countries? A number of reasons have been proposed, including more negative societal attitudes toward teenage sexual relationships, more restricted access to contraceptives, and higher costs associated with reproductive health services. The Alan Guttmacher Institute notes that countries with low levels of adolescent pregnancy, childbearing, and STIs are not only characterized by a greater acceptance of teenage sexual relationships but also provide more comprehensive and balanced information about sexuality, and the prevention of pregnancy and STIs within these relationships.

## WHAT DO PEOPLE MEAN BY "SEX"?

At a White House press conference on January 26, 1998, President Bill Clinton denied allegations of prior sexual relations with White House intern Monica Lewinsky, stating: "I did not have sexual relations with that woman." In the sense that sexual relations means male-female intercourse, President Clinton did not lie. However, sexual relations can include behaviors other than intercourse; adolescents in the early 21st century are engaging in both oral and anal sex, sometimes while clinging to the belief that by avoiding intercourse in favor of these behaviors, they officially remain virgins (Remez, 2000). Data from the NSFG show that in 2002, 16% of teens between the ages of 15 and 17 years who had not yet had sexual intercourse had engaged in oral sex.

What teens do or do not consider to be sex is also a subject that has received publicity as a result of research on virginity pledges by Peter Bearman and Hannah Brückner (2001, 2005). Approximately 1 in 10 teens in the United States takes a virginity pledge that is designed to curb adolescent sexual activity (Maynard, 2005). While it appears that taking the pledge delays the initiation of sexual intercourse for some teens, pledgers who remain virgins are more likely to have anal and oral sex. Adolescents view oral sex as less threatening to their values and beliefs, and perceive it to have fewer health, social, and emotional consequences than vaginal sex (Halpern-Felsher, Cornell, Kropp, and Tschann, 2005). However, although both oral and anal sex remove the potential for pregnancy, these activities can put teens at high risk for STIs.

## WHY DO TEENS HAVE SEX?

Much research over the past few decades has tried to work out why some teens will have sex while others will refrain, and why among sexually active teens, some will use contraception and others will not. To identify both risk and protective factors, many of these studies have used data from large surveys such as the National Longitudinal Survey of Adolescent Health (Add Health), the 1979 and 1997 National Longitudinal Surveys of Youth (NLSY79 and NLSY97), the NSFG, and the Youth Risk Behavior Survey (YRBS), supplemented with information gleaned from questionnaires targeted at more specific subpopulations of adolescents.

There is no simple answer to the question: What predicts adolescent sexual activity? Myriad structural and contextual influences play a role. For example, African-American youth initiate sexual activity at earlier ages than do European-American or Latino/a youths, and features of the neighborhood environment have been highlighted to account for this racial difference: neighborhood poverty as a factor that elevates the risk of early sexual initiation, and neighborhood social cohesion and social

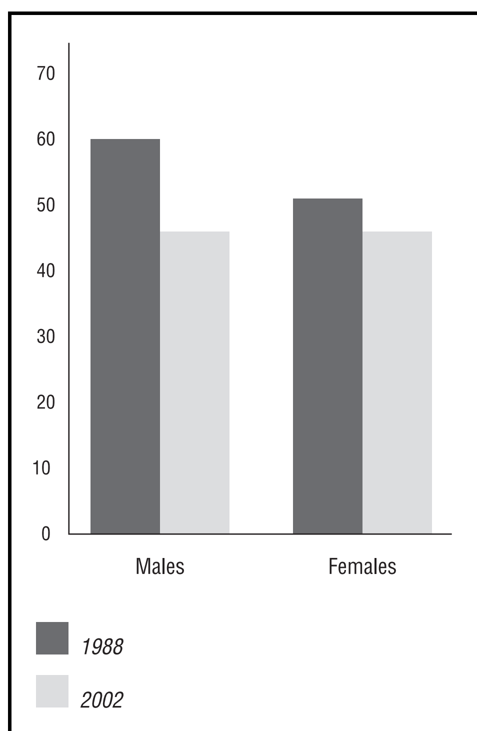


***Figure 2.*** *Percent 15–19 year olds who have had sexual intercourse.* CENGAGE LEARNING, GALE.

control that helps delay sexual onset (Browning, Leventhal, and Brooks-Gunn, 2004). Television, movies, music, magazines and the Internet all expose teens to sexual imagery, but rarely depict realistic consequences of risky sexual activities. Although relatively few studies have looked at the effect of media exposure on adolescent sexual knowledge, attitudes, and behaviors, findings generally suggest that greater exposure to sexual content within the media is associated with higher estimates of the extent to which friends are sexually active, and more and earlier sexual behavior among adolescents themselves.

Emphasis has been placed on the role of peers, and studies have found that friends' sexual behaviors, perceptions of friends' behaviors and attitudes, and the degree to which adolescents are involved with their friends all influence adolescent sexual behaviors. For example, in 2006 Renee Sieving and colleagues from the University of Minnesota found that sexually inexperienced kids in 9th to 11th grades had greater odds of having intercourse in the following 18 months when a higher proportion of their friends were sexually active. Youths who believed that they would gain their friends' respect if they were to have sex also had higher odds of initiating intercourse.

Numerous studies also demonstrate the importance of both family structure and parental processes for adolescent sexual behavior. For example, youth who grow up in intact two-parent homes are more likely to delay sexual initiation and to have fewer sexual partners than adolescents in single parent and stepfamily homes. Why? Parental supervision may be higher in two-parent families, reducing the amount of time that a teen can spend at home without a parent, and hence their opportunity to have sex. Parental monitoring also conveys to children that they matter. A 2007 study by Chadwick Menning and colleagues that finds that the more involved adolescent males are with their stepfathers the less likely they are to have sex. This finding also underscores the importance of close family relationships (Menning, Holtzman, and Kapinus, 2007). Further, even if teens cite their peers and the media as primary sources of sexual information and influences on their sexual behavior, parents can play a critical intervening role. Although having sexually active peers tends to accelerate sexual initiation, parental responsiveness to adolescents during discussions about sex can decrease risk-taking behaviors, and can buffer the negative influences of peers (Fasula and Miller, 2006). Conversely, peer effects may be stronger when parental bonds are strained (Jaccard, Blanton, and Dodge, 2005).

Reflecting different theoretical perspectives and disciplinary approaches, other research has been more qualitative in nature, using information from semi-structured, one-on-one interviews that allow teens to more easily tell their own stories surrounding their sexual experiences, and to reflect on how and why they made the decisions they did—choices that do not always appear to be in their best interests. Qualitative studies are a reminder that curiosity plays an important role, and that adolescents, like adults, have sexual desires. Such studies also underscore the importance of understanding the social contexts within which adolescents act. For example, how does the quality of a relationship or perception of romance define the context for sexual decision making? Although a teen may well understand the importance of using contraception to reduce health and social risks, their decision to actually use a condom might instead come down to whether they believe this choice might improve or harm their relationship.

In-depth interviews with inner-city Black adolescents uncovered some important gender differences in the ways in which youth approach sexual relationships (Andrinopoulos, Kerrigan, and Ellen, 2006). Whereas young men reported that sexual relationships helped them feel wanted and that they could gain social status among their peers when they had multiple partners, young women desired monogamous romantic partners for emotional intimacy, although most also reported having had nonmonogamous partners. Understanding contextual factors

such as a lack of socioeconomic opportunities for young men, or an imbalanced sex ratio as a result of the incarceration of many young men, is crucial for comprehending the types of sexual relationships that youth engage in, as the nature of the relationship can then affect the sexual activities engaged in within the relationship, and the contraceptive decisions they make (Kaestle and Halpern, 2005).

A 2005 study of adolescent sexual decision making by Tricia Michels and colleagues from the University of California provides evidence that at least some young adolescents set a priori boundaries for how far they are willing to go with a particular partner at a given time (Michels, Kropp, Eyre, and Halpern-Felsher, 2005). The limits that teens mentally set for themselves are influenced by their own personal characteristics and the nature of the relationship they are in. Study participants also acknowledged that the lines they drew now might be crossed in the future as they matured, their relationship changed, or they became more sexually experienced. Their findings also suggested a dynamic, self-regulating process of decision making as teens (especially girls) reflected on their behaviors and how they felt about them, and then either reaffirmed or reappraised where their boundaries lay.

Results from both quantitative and qualitative research methods therefore highlight a range of both personal and contextual factors that play an important role in why teens behave in the ways they do, and help to construct our overall understanding of adolescent sexual behaviors block by block. Adolescents are not only influenced by the social contexts within which they operate, but, as the life course perspective underscores, the decisions they make and pathways they take are influenced by the trajectories of their past. As Lisa Lieberman states in her essay on early predictors of sexual behavior (2006), "the seeds of sexual risk-taking are sown early in adolescence."

Adolescence is a stage in the life course marked by significant developmental growth, and as youth mature physically, emotionally, and socially, they are tempted to explore various sexual behaviors. Further, within their unique social contexts that provide both boundaries and opportunities for sexual activity, adolescents appear to consider both costs such as guilt, embarrassment, and risk of perceived negative outcomes along with benefits such as physical pleasure, social status, and intimacy when making their sexual and contraceptive decisions (Deptula, Henry, Shoeny, and Slavic, 2006). The vast array of factors that play a part in teen decision making are complex and interrelated and each can influence the weight that teens ascribe to the risks and advantages that they perceive. For example, teens who attend religious services frequently might attribute high levels of guilt to premarital sexual activity; youth with lofty academic plans might perceive the risk of pregnancy as especially damaging; and adolescents who are themselves children of adolescent parents might place a much lower significance on avoiding pregnancy.

## LOOKING TO THE FUTURE

Although it is no longer accepted that a young girl's life script is mostly written should she, like Juno, get pregnant while still a teenager, the decisions that adolescents make concerning their sexual and contraceptive behaviors still have consequences for the ways in which their life course trajectories will unfold, the futures of the next generation, and costs for society in terms of public assistance, or health care for teens and their children. It is unrealistic to expect all teens to remain virgins until marriage, but interventions that promote the value of responsible behaviors, delay sexual initiation, encourage the consistent use of contraceptives that protect against both pregnancy and STIs when teens do decide to become sexually active, and recognize that even "virgins" engage in potentially risky sexual behaviors are important ones to endorse. One can learn from the successes and failures of other countries, and should involve parents, teachers, and other adult role models as active participants in our programs. Finally, and perhaps most importantly adults must keep the lines of communication open and listen to the voices of adolescents themselves as they attempt to navigate the complex transition from child to young adult within a constantly changing culture.

**SEE ALSO** Volume 1: *Dating and Romantic Relationships, Childhood and Adolescence; Health Behaviors, Childhood and Adolescence; Sex Education/Abstinence Education; Transition to Marriage; Transition to Parenthood;* Volume 2: *Abortion; Birth Control; Childbearing.*

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***Elizabeth Cooksey***

# SIBLING RELATIONSHIPS, CHILDHOOD AND ADOLESCENCE

Within the family realm, siblings potentially affect each other in myriad ways. Psychologists generally study the quality of relationships and interpersonal dynamics of sibling relationships (see Cicirelli, 1995; Dunn, 1985). Sociologists, on the other hand, tend to focus on the structure of sibling relationships. Growing up with brothers and sisters in a family is associated with a variety of behavioral outcomes from school accomplishments to misconduct (Blake, 1989; Downey, 1995; Steelman, Powell, Werum, & Carter, 2002). Siblings, as members of the family primary group, can and do affect one another over the life course. Envision a family with more than one child at home. As a child matures any sibling may be a confidante or a rival, an ally or foe, a coresident or occasional housemate. Scholarly study of the role that siblings play in child development ironically commands considerable scholarly attention at the precise moment in history when birth rates in most industrialized societies are dropping. Indeed, the famous "only one child" policy in China epitomizes a worldwide trend. Knowledge about whether and how siblings matter thus is ever more compelling.

Virtually every scholar recognizes that the family is the most enduring influential small group to which individuals will ever belong. Families ordinarily affect their members across the life cycle. Because contemporary families are in the midst of significant and sometimes unforeseen changes, experts express concern that children may be adversely affected by such transformations. Growing up in a home with siblings helps shape a child's growth in both positive and negative ways. We focus on the consequences of sibling structure features insofar as this is where most scholarly attention is directed. The most investigated outcome in which siblings may play a role is educational achievement.

## CHARACTERISTICS OF SIBLING RELATIONSHIP RESEARCH

Much of what we suspect about the impact of siblings comes from study of the four characteristics that comprise the sibling matrix: sibship size, birth order, space intervals, and sex composition (Steelman, 1985). Sibship size is simply the number of brothers and sisters within the family. Birth order is an individual's rank in the age hierarchy of the sibling group, for instance, firstborn, second-born, and so forth. Child spacing is the time interval that separates consecutive or adjacent siblings. Sex composition captures whether a child is reared in a

## BIRTH ORDER

Popular interest in birth order is as high as ever, and, in 2007, the highly prestigious journal *Science* presented new data that suggested the superiority of the eldest child in academics. Renewed interest in birth order followed the publication of Frank J. Sulloway's 1996 book *Born to Rebel: Birth Order, Family Dynamics, and Creative Lives*. For his data, Sulloway asked academic experts to identify famous scientists and other academic luminaries over the past 500 years. He considered those most referenced as those who essentially leapfrogged over their contemporaries in terms of discovery, innovation, and philosophy and identified their birth orders by bibliographic and other archival sources. He observed that although first-borns are more likely than later-borns to become scientists, the latter group more likely spearheaded transformative ways of thinking. Nicolaus Copernicus, Charles Darwin, and Galileo Galilei, all later-born children, exemplify Sulloway's reasoning. Although his study is often criticized for methodological flaws, it pushes the link between birth order and intelligence back to the front burner. Whether future research will corroborate Sulloway's thesis is uncertain, but his bestselling book almost single-handedly reignited the flame of interest in it.

sibling group composed of same sex or opposite sex siblings. These sibling group characteristics mold the conditions under which children and their siblings' lives develop.

### PERSPECTIVES ON CHILD DEVELOPMENT

There are two well-known rival views of how the sibling group as a set affects child socialization. The first is Robert Zajonc and Gregory Markus's (1975) confluence model, which maintains that firstborn and children from small families excel in academic outcomes compared to their counterparts. It purports that a child's intelligence is affected by the dynamic intellectual climate to which he or she is exposed during maturation. The confluence model explains the joint consequences of the number of siblings and birth order on intelligence. The model, moreover, applies to the effects of child spacing, sex composition, and parental absence. At the time the model was fashionable, conventional wisdom was that children in large families and at later birth orders were at an intellectual disadvantage relative to their counterparts. Follow this logic: Suppose that one considers just raw intelligence, not adjusted for age (the standard IQ test). The intellectual atmosphere is the average of the intellectual levels of all family members divided by the number of people in the household. Thus, as the sibling group expands in the number of children (ordinarily less intellectually stimulating), the weaker the intellectual climate to which any given child is exposed. Note also that child spacing should logically matter. The further children are spaced, the greater the odds that both an older child and a much younger newborn sibling experience a similar intellectually stimulating environment.

Even sex composition of the family can be tied to intellectual development, given sex differences. Boys traditionally outperform girls in math and girls outperform boys in English. Families populated with more boys should accordingly benefit from higher intellectual stimulation in the subjects of math and science whereas the presence of girls should enhance reading and language arts (Steelman, 1985). Despite its elegance, the confluence model has not received consistent empirical support and indeed is quite often disconfirmed. Nonetheless, to date no one has provided a definitive test of the model.

Another perspective, the resource dilution model, is embraced by many social scientists for its elegance (Downey, 1995, 2001). Put simply, the amount of resources available to any child is diminished by the number of siblings with whom he or she must compete. Resources cover a gamut of things that children may require to advance academically and in other realms. They encompass social capital or the extent to which parents spend time with children and have ties with important figures in the school system. Financial resources are very important, especially for adolescents who may require parental assistance as they plan to go to college. Educational materials such as encyclopedias or computers in the home are also pivotal. Finally, the educational attainment of parents and siblings (their human capital) may affect a developing child. The greater the number of siblings, the less resources that parents can divest to their children, whether they are social, intellectual, cultural, or economic. Under resource dilution principles, birth order does not make a difference but the number of siblings and the spacing between them does. As the family grows by adding children, there should be fewer resources to allocate to any given child. If parents space children widely, then they have time to recover from financial and other obligations before the next child arrives.

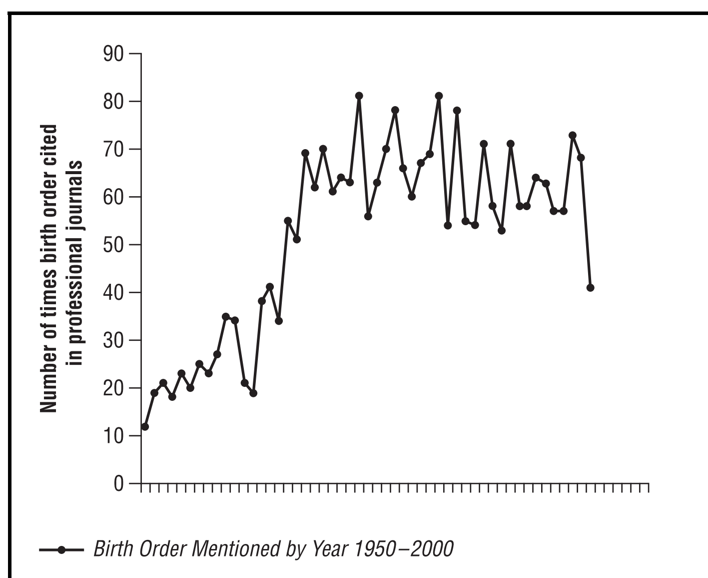


***Table 1.*** *Scholarly research that includes birth order.* CENGAGE LEARNING, GALE.

Despite vast evidence to support the resource dilution hypothesis, scholars remain uncertain about whether or not children's development is negatively affected under all conditions. Whereas the number of siblings is usually found to be a detriment to children and adolescents when it comes to educational progress, there are noteworthy exceptions in which family size has either no impact or a positive one (Guo & Van Wey, 1999; Steelman et al., 2002). Under conditions in which families have abundant resources, the size of the sibling group may not count so much. Nonetheless, the majority of studies suggest that sibship size dampens educational progress. On other outcomes such as teamwork and sociability that remain less studied, the number of siblings may be beneficial (Steelman et al., 2002). Indeed the literature on siblings is often critiqued for its overwhelming concentration on just those outcomes that typically favor small families over large ones, such as educational advancement. It might be more than coincidence that as the birth rate has declined, the proportion of students going to college has generally increased.

Whether one takes a confluence model or a resource dilution perspective, as the number of siblings increases the amount of educationally lucrative resources that any given child can depend on relative to their counterparts seemingly decreases after other interrelated variables are statistically controlled (Downey, 1995; Steelman, 1985). Correspondingly, the number of siblings is almost invariably considered in attempts to understand where and when children and adolescents are privileged or are shortchanged as they mature. It is noteworthy that the number of siblings has become a standard factor included in models of status attainment. Such models attempt to understand how family dynamics over time work to either encourage or discourage educational and occupational successes.

Birth order intersects with the interests of life course scholars because firstborn children are the sole ones who at least for some interval enjoy uninterrupted time with parents and, as such, may or may not profit from their position in the age rankings (see Conley, 2004). Correspondingly, later-born children more likely arrive at the time in the life course when parents reach their earnings peak and, because they are last, may profit from mentoring by older siblings.

Another sibling structure variable that meshes nicely with resource dilution and confluence model is child spacing. Brian Powell and Lala Carr Steelman (1993) observe that the more closely spaced consecutively born children are, the less likely parents can prepare for college and other advantages to pass on to their children. Nonetheless, there also may be payoffs to close spacing, such as greater opportunities to interact with brothers and sisters as age mates in ways that in no small measure shape interests, hobbies, and who children pick as friends. Siblings may also form coalitions with each other to challenge parental authority. Nonetheless, a widely spaced child may profit in a different way. Depending on birth order position, large age differences between siblings may set the stage for either giving or receiving help in school and other activities. As an example, the older sibling may help mentor the younger sibling in

school activities and in so doing learn more himself or herself. Additionally, wider spacing allows parents to recover from financing older children's training just in time to assist their younger children.

Not surprisingly, many contemporary child advice books actually encourage families to consider such spacing strategies to benefit their children. Given the constraints of the childbearing years for women and the often accidental pregnancy, parents surely cannot completely control when they have children how their children will be spaced, nor can parents control the genders of the children they bear. All male or all female sibling groups may experience a lifelong difference in the way that parents rear them—the former focusing more on "masculine" domains, the latter on "feminine" ones. Still, there is no consistent support for any gender composition effect, and scholars remain baffled by these discrepancies observed across a number of studies (Conley, 2000; Steelman et al., 2002).

Notably, siblings may matter for different reasons as they mature. Social scientists have begun to broaden research on the sibling group to include alternatives to the traditional nuclear family. Specifically, scholars in the 21st century are concentrating on the addition or subtraction of biological siblings, half-siblings, step-siblings, or a combination of these that alter the overall character of the sibling group over time (Tillman, 2007; Zill, 1996). To a great extent the child's experiences are linked both to their siblings and their parents, who decide or accidentally are responsible for the structure of the sibling group. Birth order continues to tantalize laypeople despite the fact that many claims of early researchers that firstborns are superior to their later-born counterparts in terms of intellect have been seriously challenged. Most commonly, but not always, observed is that as the number of siblings increases, educational and occupational opportunities decline. So studies of educational and occupational attainment routinely include the number of siblings as a predictor but are much less likely to include birth order.

## FUTURE RESEARCH

Research about siblings should and probably will move in many exciting and needed directions. For example, scholars need to collect direct behavioral observations of siblings as they interact. Such a study clearly would animate if and how siblings make a difference in each other's lives. A major flaw in existing sibling influence research is the lack of data from whole families. Whereas the earliest studies of siblings more or less presumed the presence of both biological parents, the need to expand research to encompass alternatives family forms that in turn affect the character of the sibling group is now acknowledged. Step-, half-siblings, or siblings that may be in the custody of another parent may have different effects than do siblings who always live with one another (McLanahan & Sandefur, 1994; Zill, 1996). Across the life course young children and adolescents may experience the entrance or exit of siblings as parents divorce and remarry at high rates. To comprehend family dynamics requires investigating families across time.

Note also that the way in which children are arranged may infringe on the extent and manner in which parents may invest in and treat children. In contrast to living with both biological parents, children who abide with single parents, stepparents, and cohabiting partners are becoming more common. These variations also affect the character of the sibling group and pose a daunting challenge to researchers concerned with understanding sibling influence. Children who do not grow up with both biological parents are much more likely to live with step- and/or half-siblings and to experience fluctuations in the siblings with whom they reside. Consequently, contemporary research about the impact of siblings ordinarily must take into consideration types of families in which sibling groups are embedded. Co-resident siblings, for example, tend to take a negative toll on academic achievement during adolescence and early adulthood (Blake, 1989; Downey, 1995, 2001; Steelman et al., 2002) as does close spacing between siblings. It is unclear if non-coresident siblings have a similar impact. Young children may have to share parental attention with closely born siblings, often found in blended families, so much so that it has deleterious consequences for them. As adolescents approach independence, how economic resources are distributed in families with multiple types of siblings may even more profoundly affect educational expectations than is ordinarily observed in traditional nuclear families (Steelman et al., 2002).

In the early 21st century, scholars have begun to recognize how family change in the sibling group may have various consequences for children across the life cycle. A sibling can mean many different things in contemporary society. It is a status that may or may not include residential and nonresidential half- and step-siblings, as well as other relatives reared as veritable siblings such as cousins, foster children, or even the children of older siblings. All of these represent outstanding challenges to define what a sibling is. Grappling with this issue, although not easy, is a necessary step in future research.

Another direction involves evolutionary theory, which urges scholars to view siblings through a different prism. These theories posit that although siblings have a genetic connection with one another (they share 50% of their genes), their greatest gene share is with oneself. Proponents of an evolutionary psychology position

would argue that genetic connectedness prods children to protect their siblings against external threats. Concern for the welfare of brothers and sisters emanates from the innate tendency to protect one's genetic heritage. Paradoxically, it also accounts for sibling rivalry. The genes that a person most wants to protect are his or her own. Hence siblings compete with each other to garner familial resources to advance an even larger portion (100%) of their genes into the next generation. Evolutionary theories also explain why biological siblings should be more vested than step-siblings (whose genes do not coincide with the other sibling) and why identical twins are the most protective of each other among the various types of siblings.

Future research on siblings must also move away from reliance on snapshot data of children taken at one point in time toward the examination of the role of siblings as they interact across the life span. So far sibling research is just not complete enough to capture the full essence of family life. Moreover, the need to collect and analyze data on whole families over the life cycle cannot be understated. More studies that analyze longitudinal data are warranted and may help reconcile the many inconsistencies already documented. Through these techniques researchers can assess the growing family forms and understand changes in the sibling group that occur through divorce, remarriage, and single-parent families. Finally, sibling research should devote more attention to outcomes other than those such as educational success that typically favor small families. The extent to which children cooperate and share, for example, could be a by-product of maturation in a large family. If scholars move in the recommended directions reviewed above, then a greater appreciation of the extent to which siblings affect one another across the life cycle could become a reality.

**SEE ALSO** Volume 1: *Identity Development; Family and Household Structure, Childhood and Adolescence; Parent-Child Relationships, Childhood and Adolescence;* Volume 2: *Sibling Relationships, Adulthood;* Volume 3: *Sibling Relationships, Later Life.*

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## SINGLE PARENT FAMILIES

**SEE** Volume 1: *Family and Household Structure, Childhood and Adolescence.*

## SOCIAL CAPITAL

*Social capital* refers to social relationships that have the capacity to enhance the achievement of one's goals. Social relationships are viewed as investments, whether the investment is conscious or unconscious. The fundamental insight of the idea of social capital is that life chances are influenced by the social resources available through social networks. This fundamental insight, coupled with the generality of the definition, has contributed to social capital's widespread appeal across a variety of research

areas, including research on child and adolescent development. Social capital is believed to aid in the achievement of both individual goals, such as educational attainment and achievement, and collective goals, such as safe neighborhoods that promote healthy psychosocial development.

## ORIGINS AND CONCEPTUAL DEVELOPMENT OF THE SOCIAL CAPITAL

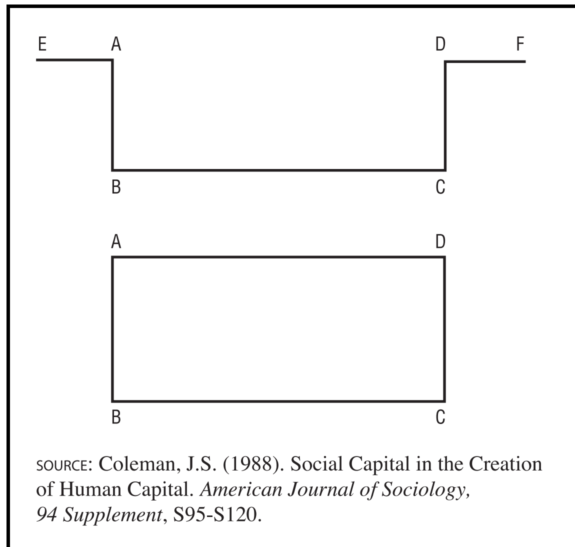
The theoretical roots of social capital can be traced to the work of sociologists Pierre Bourdieu (1930–2002) and James Coleman (1926–1995) during the late 1980s. Bourdieu (1986) introduced social capital as a part of his larger project aimed at understanding the social reproduction of inequality, or how social class is passed from one generation to the next. He defined social capital as "the aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (1986, p. 248). The amount of social capital to which an individual has access depends on both the quantity of his or her connections and the amount of capital (e.g., financial, human, or cultural) that each network member possesses. Hence, membership in various social groups (such as gender, race, and social class) provides differential access to social capital. Bourdieu portrayed the accumulation of social capital as the result of conscious and unconscious long-term investment strategies designed to establish or maintain relationships of perceived obligations that can be accessed on some future occasion. The solidarity and resources provided by the social capital of the dominant class enable it to maintain its position.

Coleman's purpose in introducing social capital was to bridge the gap between sociological and economic explanations of social action by showing how explanations based on rational action could fit into a framework that also emphasized the importance of social context. Coleman wrote that social capital is a "variety of entities with two elements in common: They all consist of some aspect of social structures, and they facilitate certain actions of actors—whether persons or corporate actors—within structures" (1988, p. S98).

According to Coleman, social relationships can provide three major types of resources. The first, obligations and expectations, occurs when a person can count on their favors being returned. The reciprocity that allows one to collect "credit slips" for future use depends on the trustworthiness of the social environment. Information is the second type of resource. For instance, social relations are important sources of information about job openings and how to apply to college. The third type of resource is norms and effective sanctions. Coleman argued, for example, that strong and enforceable pro-school norms within a community facilitate the job of schools and teachers. A social network with a high level of closure, when a group's members are highly interconnected and not very connected to persons outside of the group, can more effectively maintain compliance to norms because members can act collectively to restrain undesirable behavior. In the context of child development, Coleman argued that *intergenerational closure*, when parents know the parents of their children's friends, is particularly important. Because intergenerational closure enhances communication among parents, it facilitates norm enforcement and parental control over their children's behavior.

Bourdieu and Coleman's definitions share important similarities. Both identify social capital as the resources that exist in social relationships rather than as something that is tangibly possessed by individuals. In addition, in both definitions it is clear that investment in interpersonal relationships is what creates social capital. However, the Bourdieu and Coleman formulations differ in important ways. Consistent with their different purposes in introducing the concept, they diverged on the phenomena that they used social capital to explain. Bourdieu used it to explain the reproduction of inequality. In contrast, Coleman used the concept in a more general sense to explain a wider range of outcomes, from dropping out of high school to the successful organization of social movements, and did not emphasize the nature of groups that act in ways to concentrate resources within their boundaries. Also, while both theorists viewed social capital as something that can exist in collectivities, there is a crucial difference in their formulations at this level. In his discussion of social capital at the group level, Bourdieu refers to homogeneous groups that have a unified set of interests. Coleman's discussion suggests that social capital can serve as a public good in large groups, such as neighborhoods, that have a number of subgroups within them. His work on social capital did not consider inequality in access to social capital within such aggregates.

While Bourdieu's and Coleman's work on social capital has been highly influential, it was political scientist Robert Putnam's (b. 1941) work on social capital that galvanized its appeal across almost every social scientific discipline and even into popular discourse. Putnam drew from Coleman's work on the nature of social capital as a public good and defined social capital as "features of social organization, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions" (1993, p. 167). He argued, for example, that regional levels of social capital account for why the identical local government structure functions so much better in the regions of northern Italy than in




SOURCE: Coleman, J.S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology, 94 Supplement*, S95-S120.

***Intergenerational Closure.*** *Network involving parents (A, D) and children (B, C) without (top) and with (bottom ) intergenerational closure.* CENGAGE LEARNING, GALE.

the regions of southern Italy (1993). He has also attributed the decline in American political engagement, as reflected by voter turnout, to a decline in social capital (2000).

Coleman and Putnam's definitions of social capital are so broad that they have resulted in a proliferation of social phenomena labeled as social capital, leading some commentators—Charles Kadushin (2004) and Alejandro Portes (1998), for example—to question the utility of the concept. Despite this concern, the use of social capital continues to flourish. As Putnam (2000) notes, social capital is not just one thing, much like physical capital is not just one thing. It is useful to consider that there are different forms of social capital without extending the "notion of social capital beyond its theoretical roots in social relations and social networks" (Lin, 2001, p. 28). While there is no shortage of alternative definitions of social capital, research on child and adolescent development has tended to follow Coleman's framework by focusing on norm enhancing social relationships or, to a lesser extent, Bourdieu's ideas by focusing on the role of social capital in social reproduction.

## RESEARCH ON SOCIAL CAPITAL AND CHILD AND ADOLESCENT DEVELOPMENT

Multiple social contexts, including the family, friendship network, school, and community, are important in the lives of children; as such, adolescents and most social capital research on children's outcomes has focused on one or more of these contexts. Following Coleman, early research on social capital and child development focused on parent-child relationships. With some exceptions, research generally finds that living in a two-parent family, having fewer siblings, parental monitoring, discussion of school with parents, and parental expectations that that their child will go to college are associated with lower chances of dropping out of high school, higher chances of attending college, higher grades, and higher achievement on test scores. (For a comprehensive review of social capital studies in the area of education through 2001, see Sandra Dika's and Kusum Singh's *Applications of Social Capital in Educational Literature* [2002].) Research on the effects of parent involvement in school has found inconsistent results; some studies find positive associations with school achievement, whereas others find negative associations, likely because problems in school often prompt parent involvement.

Social capital research has also examined other important relationships. Friends can influence each other's academic outcomes in several ways. First, they act as agents of socialization through which pro-school norms can be encouraged and enforced, which can translate into more successful academic outcomes. Having academically successful friends provides an adolescent with access to educational resources. In addition, friends can act as role models. R. Crosnoe, S. Cavanagh, and G. H. Elder. (2003) observed that having friends with a higher grade point average and higher school attachment decreases having trouble at school.

Still other research has focused on school and community social capital. R. D. Stanton-Salazar and S. M. Dornbusch (1995) argued that schools can provide important social resources for low-income students by providing guidance in the college application process, for example. Furthermore, a good relationship between the family and the school enhances the likelihood of obtaining valuable resources at the school. Y. M. Sun (1999) found that in communities with higher levels of adolescent participation in religious activities and sports groups and where parents belong to more organizations, standardized tests scores were higher. In addition, higher community levels of intergenerational closure and being able to work together were related to higher achievement on test scores. Not only did these forms of community social capital enhance educational achievement, but they also explained a part of the association between neighborhood poverty and lower educational achievement.

Although most examinations of social capital concentrate on its positive effects, it can easily have negative consequences as well. Coleman (1988) himself recognized that a form of social capital that is useful for one desired end might be disadvantageous to the achievement of another goal. For example, community norms that

discourage delinquency might also hinder creativity. In addition, not all social networks are characterized by prosocial norms. Moreover, some relationships might not provide helpful social support. For example, in a sample of African-American parents, M. O. Caughy, P. J. O'Campo, and C. Muntaner (2003) found that in poor neighborhoods, knowing many neighbors was associated with more behavioral problems among their children. In nonpoor neighborhoods, having neighborhood ties was associated with fewer child behavioral problems. Similarly, in a study of poor families, F. F. Furstenberg (1993) found that in the most disadvantaged and disordered neighborhoods, avoiding neighbors and activating ties to resources outside of the neighborhood proved to be a more successful parenting strategy than forging close ties with neighbors.

An important insight to take from these findings is that the value of social capital may depend on the situation. For example, is social capital more important and therefore effective for disadvantaged youths than for middle-class and affluent youths because it may offset the lack of other types of resources? Or, does social capital exacerbate inequality by being more effective for already advantaged youths? In one study, parental access to time and financial assistance from friends was associated with higher educational attainment for the offspring of high-income families, but not low-income families, suggesting that lower-income families are less able to access help that provided educational resources (Hofferth, Boisjoly, & Duncan, 1998). D. H. Kim and B. S. Schneider (2005) found the effects of college visits and matching educational expectations by the student and parent on attendance at a selective 4-year college or university were larger when parents had higher levels of education. In contrast, parental participation in college and financial aid programs at the high school pays off more for children of lower educated parents, which is consistent with Stanton-Salazar's and Dornbusch's (1995) argument that school resources are particularly important for working and lower-class families. Sun (1999) found that the negative effects of high levels of nontraditional families in the community on school achievement can be partially offset by high levels of parent participation in organizations and intergenerational closure, suggesting that community social capital can mitigate disadvantageous neighborhood circumstances. Future research will undoubtedly continue to examine the contexts in which social capital is more and less useful.

## GAPS IN CURRENT KNOWLEDGE

Two decades of research on social capital have produced significant and important findings, but there is still more to learn. First, much of the research on social capital and child development has focused on educational outcomes. With some notable exceptions, relatively less is known about whether and how social capital influences outcomes such as social adjustment, behavioral problems, violence, and psychosocial resources such as an internal locus of control. S. De Coster, K. Heimer, and S. M. Wittrock (2006) found that intergenerational closure does not appear to curtail delinquent behavior. This is surprising in light of the association of intergenerational closure with a host of educational outcomes that is purportedly explained by the ability of parents to enforce norms, and, accordingly, more research is needed to understand the mechanisms that explain the relationship between closure and school outcomes.

Second, there is more to learn about the relative advantages of *bonding* versus *bridging* social capital. Bonding social capital is characterized by networks rich in strong and densely connected ties, usually of socially similar persons, whereas bridging social capital is characterized by dispersed networks that access disparate social worlds. In the context of education, bonding social capital might be beneficial because it is conducive to norm enforcement and the social support that adolescents need to be successful. Yet as S. L. Morgan and A. B. Sørensen (1999) argue, bridging social capital might be beneficial because it accesses diverse pools of information that create greater opportunities for learning. Rather than one form of social capital being generally more advantageous than the other, it may be the case that bonding social capital is more important for some types of educational outcomes, such as grades and school retention, whereas bridging social capital may be more advantageous to outcomes such as going to college because it is more likely to provide beneficial information. Thus far, research has not been able to adequately assess this debate.

Finally, as the field moves forward, measures will continue to be refined in ways that more closely tap the conceptual definitions. Certainly, much progress has already been made. Early research on social capital relied heavily on proxies, or very indirect and approximate measures, for social capital such as two-parent families, number of siblings, and number of residential moves. While these factors may influence the availability of family and community social capital, there are other factors, such as unmeasured aspects of socioeconomic status or family background, that could account for their relationships with better child outcomes. Many of the later studies on social capital and adolescent outcomes were based on data from the National Educational Longitudinal Study, a survey that includes several somewhat better measures of social capital, but is still limited in its information about social networks. A more recent survey, the National Longitudinal Study of Adolescent Health,

has made it possible to measure the content and structure of school-based adolescent friendship networks.

However, there are still aspects of social capital that cannot be adequately measured with a widely available survey. For example, no survey has collected information about adolescent relationships outside of the immediate family and the school. In addition, the parental social networks are likely quite important in terms of the information they can provide about parenting techniques and the educational system, for example, and yet little information exists on them. Collecting more detailed and direct measures of social capital will allow researchers to address important issues, such as the relative benefits of bridging and bonding social capital, as well as to better understand the contexts in which various forms of social capital are more or less useful.

**SEE ALSO** Volume 1: *Coleman, James; Cultural Capital; Data Sources, Childhood and Adolescence; Friendship, Childhood and Adolescence; Human Capital; Intergenerational Closure; Mentoring; Parental Involvement in Education; Peer Groups and Crowds; Socialization;* Volume 2: *Parent-Child Relationships, Adulthood.*

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# SOCIAL DEVELOPMENT

Peer relations are a critical aspect of youngsters' social development (Hartup, 1996). Children and adolescents place considerable importance on their peer relations and are influenced strongly by the attitudes and behaviors of their peers. Peers also provide a source of emotional support that rivals and, during adolescence, even exceeds support from parents.

Studying the development of peer relations in childhood and adolescence is essential for understanding the foundations of youths' friendships and romantic relationships into adulthood and across the lifespan. Children and adolescents who encounter serious difficulties in their peer relations early on are at risk for the development of later interpersonal and psychological difficulties, including delinquency, marital problems, substance use, and depression. Thus, efforts to understand and promote positive peer relations in youth is an important mental health goal. This entry describes the types of peer relations that are important for children and adolescents. Theory and measurement issues also are described.

## CHILDREN'S PEER RELATIONS

During elementary school, children typically spend most of the day in self-contained classrooms with a specific group of classmates. In this context, children's peer status—or degree of acceptance from the peer group (i.e., classmates)—is a salient aspect of their peer

relations. Peer acceptance provides children with a sense of belonging and inclusion.

Children's social status has been defined by the degree to which they are accepted by their peers. Specifically, social status groups are determined by ratings of peer acceptance (liking) and peer rejection (disliking) as follows: popular (high on liking, low on disliking), rejected (low on liking, high on disliking), neglected (low on liking and disliking), and controversial (high on liking and disliking). Popular children often have positive social skills and personal competencies, whereas rejected children display a number of interpersonal, emotional, and academic difficulties, such as aggressive, disruptive, and inattentive behaviors and feelings of loneliness (Coie, Dodge, & Kupersmidt, 1990).

In addition to peer acceptance, peer friendships (close supportive ties with one or more peers) provide children with a sense of intimacy, companionship, and self-esteem. Children's close friendships typically are with same-sex peers and vary in terms of quantity and quality. Most children have a close friend in school, although girls are more likely to have a best friend than are boys and to have more peers whom they rate as close friends. Common positive qualities of children's friendships include sharing activities, affection, receiving help, trust, and sharing. Intimacy and emotional support also are evident in children's friendships and increase during adolescence (La Greca & Prinstein, 1999). Friendships also have negative aspects, such as conflict and betrayal, although most children report more positive than negative qualities in their close friendships.

### ADOLESCENTS' PEER RELATIONS

As children make the transition to middle school, their peer networks expand considerably. Most adolescents have a peer network that includes their best friends, other close friends, larger friendship groups or cliques, peer crowds, and often romantic relationships (Furman, 1989; Urberg, Degirmencioglu, Tolson, & Halliday-Scher, 1995).

**Peer Crowds** Adolescents interact with a large number of peers and need to find their place in the larger social system. In this context peer crowds can be viewed as an outgrowth of the social status groups observed among children (La Greca & Prinstein, 1999). Peer crowds are distinct from smaller friendship cliques in that they are much larger, and peer crowd members may not know or be friends with one another.

Peer crowds reflect adolescents' peer status and reputation as well as the primary attitudes and behaviors by which adolescents are known to their peers. Although peer crowds and their labels vary, the most common crowds are jocks (or athletes), populars (or elites, preps, hot shots), brains (or nerds), burnouts (or druggies, dirts), alternatives (or nonconformists, goths, freaks), loners, and special-interest groups (e.g., dance, music; Brown, 1990; La Greca, Prinstein, & Fetter, 2001).

Peer crowds provide opportunities for social activities, friendships, and romantic relationships and provide a sense of belonging and identity. This is particularly important in middle school because peer crowds may help younger adolescents define their identity and reputation and provide norms for behavior and "fitting in." The importance of peer crowds peaks in high school, followed by a decline as adolescents focus their attention on close friends and romantic relationships. At the same time, peer crowds are evident among college-age youth and gay men, suggesting that crowd membership can be salient even into young adulthood (Urberg et al., 1995).

**Friendships** Adolescents spend more time talking to peers than they spend in any other activity. In the current technological age, adolescents' use of mobile phones and text messaging to connect with friends is widespread. Adolescents' interactions with friends occur primarily in the context of dyadic interactions with close friends or romantic partners and in friendship cliques.

Cliques are friendship-based groupings that may vary in size (usually from five to eight members), density (the degree to which each member regards others in the clique as friends), and tightness (the degree to which cliques are open or closed to outsiders). Cliques are the primary basis for adolescents' interactions with peers, and an adolescent's best friends are likely to participate in the same clique or group (Urberg et al., 1995). As adolescents begin to date, same-sex cliques may transition to mixed-sex groups. Over time cliques often are replaced by adolescents' interactions with close friends, romantic partners, or smaller friendship-based groups (La Greca & Prinstein, 1999).

Adolescents' close friendships have many of the same qualities as children's friendships (companionship, trust, and so on) but are characterized by intimacy, that is, the sharing of personal, private thoughts and feelings and knowledge of intimate details about friends. As with children, adolescent girls report having more close friends than do boys and report more intimacy in those relationships. However, adolescent boys have more open friendship groups than girls do and are more willing than girls to let others join ongoing interactions. During adolescence having close "other-sex" friends also becomes common and may set the stage for the development of romantic relationships.

The quality of adolescents' close friendships is linked with psychological adaptation. For example, adolescents

who report more positive qualities in their best friendships also report less social anxiety than do their peers. Moreover, high levels of negative interactions in adolescents' close friendships are related to greater social anxiety and depressive symptoms.

## SOCIALIZATION VERSUS SELECTION

As discussed above, peer relations serve many important developmental functions, providing support, a sense of belonging, opportunities for social interaction, and a means of developing identity. The literature on peer relations is compatible with the theory of homophily. Homophily (Kandel, 1978) posits that individuals with similar interests and characteristics tend to cluster together and seek one another out (selection). Further, peers reward and reinforce similar attitudes and behaviors among group members (socialization).

Children often gravitate toward others who are similar to themselves; this is consistent with selection theory. In fact, children select friends on the basis of similarities in observable characteristics such as sex, race, and preference for engaging in certain activities rather than on less observable factors such as personality, attitudes, and self-esteem. Friendships typically occur among youth of the same age and gender, although this changes in adolescence (Aboud & Mendelson, 1996).

Socialization is also important in children's peer relationships. For example, low-achieving 5th-, 6th-, and 7th-graders who affiliate with higher-achieving friends perform better academically than do those who affiliate with low-achieving peers. Thus, although children gravitate toward similar peers to form friendships, those friendships also socialize children and influence their behaviors and development.

Selection and socialization processes also are relevant for adolescents (Aboud & Mendelson, 1996). For example, adolescents may affiliate with certain peer crowds because of perceived similarities of interests, behaviors, or skills, reflecting a selection process. Smart adolescents may affiliate with the brains; athletes may affiliate with the jocks. However, socialization also may occur as adolescents feel real or perceived pressure to conform to or comply with the attitudes and behaviors that are prevalent in their peer crowd. For example, adolescents affiliating with the burnouts may feel pressure to drink or smoke; adolescents affiliating with the brains may be encouraged to take academic work seriously. Research also suggests that adolescents' aspiration to belong to a particular crowd may lead them to engage in behaviors they believe to be typical of that crowd (Brown, 2004).

Selection and socialization processes also occur within adolescents' friendships. Like children, adolescents gravitate toward others who share similar qualities, interests, and personal characteristics, although selection does not fully explain the formation and maintenance of adolescents' friendships. Socialization processes in friendships are also important and may influence adolescents' academic achievement. Although selection and socialization processes are difficult to disentangle, they provide a framework for understanding the importance of adolescents' friendships and peer crowds.

## MEASUREMENT ISSUES

Peer relationships are challenging to study because they can be temporary and dynamic. Longitudinal studies are particularly revealing because they may capture the shifting nature of peer relationships and help clarify selection and socialization processes. Overall, self-report measures are used widely to capture youths' reports of close friendships and membership in a peer crowd; however, peer nominations, observations of group/dyadic interactions, and ethnographic observations also are important (Brown, 2004).

In assessing peer relationships, it is important to consider youngsters' ethnic/cultural background to understand the larger context in which relationships develop. Friendships may be defined and valued differently in different cultures; friendship selection also may vary by culture (Brown, 2004). In fact, research suggests that African American adolescents select friends on the basis of ethnic identity rather than academic orientation or substance use, whereas the opposite pattern may be prevalent for Asian and European American adolescents (Hamm, 2000). This may be because social concerns, such as racism, are more widely experienced by African American teens, making their ethnicity/race a more salient attribute for friendship selection than is the case for other adolescents. As another example, the high value placed on academic achievement in the Asian American culture may foster adolescent friendships that develop around academic pursuits.

Peer nominations are the most common method of assessing children's peer acceptance and friendships (Coie et al., 1990). Peer nominations require each child within a classroom or group to nominate up to three peers that he or she "likes the most" and "dislikes the most" (or "likes the least"), used for evaluating peer acceptance/rejection, or to nominate up to three "best friends," used for evaluating mutual friendships. Those nominations are used to categorize children into popular, rejected, neglected, and controversial social status groups to identify mutual friendships. Teachers' and parents' reports of peer acceptance and rejection may be useful when peer nominations are not possible. Peer networks, or mapping out patterns of relationships within the context of a school or other setting, are also commonly used

in research to examine how adolescents form friendships and romantic relationships. Examining these networks facilitates the understanding of how adolescents transmit ideas, values, and also disease among their peers. In addition, self-report measures such as the Friendship Quality Questionnaire (Parker & Asher, 1993) have been used to evaluate the number and quality of children's close friendships. Overall, it is best to obtain several measures by using multiple approaches.

Although peer nominations are used widely with children, they are employed less with adolescents, whose peer networks are larger and are not limited to a particular school or classroom. Further, it is important to assess multiple relationships among adolescents, such as close same-sex and other-sex friendships and romantic relationships. Self-report measures such as the Network of Relationships Inventory (Furman & Buhrmester, 1985) have been used to assess the number and quality of adolescents' friendships and romantic relationships.

Although some investigators have obtained peers' perceptions of crowd affiliations (Sussman et al., 1990), self-report measures are used most commonly to assess adolescents' peer crowd affiliations. Measures such as the Peer Crowd Questionnaire (La Greca & Harrison, 2005; La Greca et al., 2001) describe and label each of the common peer crowds (e.g., jocks, populars, brains) and ask adolescents if those crowds are present in their school and, if so, what they are called. Adolescents then select the crowd they identify with most closely. Adolescents also may rate their degree of identification with each peer crowd (using a Likert scale) to obtain scores for multiple peer crowds. Sometimes additional items may be added, depending on the particular research questions. For example, adolescents have been asked how peers would classify them, which peer crowds they would like to belong to most, and the peer crowd affiliations of their three best friends or romantic partner. Overall, measures assessing peer crowd affiliation have been found to be reliable, have good construct validity and interrater reliability, and show good correspondence between adolescents' self-identification and peers' assignment to crowds.

## FUTURE RESEARCH

Peer relations play a significant role in the social and emotional development of children and adolescents and provide an important source of social support. The quality and type of friendships change as children develop into adolescents. Future research might address cultural variations in peer relationships as well as the role of changing technology, such as the Internet and cell phones, on these relationships. Because friendships and peer relationships are so crucial for the social and emotional development of children and adolescents and have implications for interpersonal functioning across the lifespan, efforts to understand and promote competence in youngsters' peer relationships should be an important target of developmental research, school and public policy, and mental health promotion and intervention.

**SEE ALSO** Volume 1: *Dating and Romantic Relationships, Childhood and Adolescence; Friendship, Childhood and Adolescence; Peer Groups and Crowds; Socialization.*

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# SOCIAL INTEGRATION/ ISOLATION, CHILDHOOD AND ADOLESCENCE

SEE Volume 1: *Bullying and Peer Victimization; Friendship, Childhood and Adolescence; Peer Groups and Crowds.*

# SOCIALIZATION

The concept of and approaches to socialization have a long history in sociology, psychology, and anthropology. Although life course sociologist Glen H. Elder Jr. (1994) has argued that socialization has declined as a research paradigm and become part of other paradigms, especially the life course perspective, theory and research on childhood and adolescent socialization in the 1980s and 1990s have revitalized the field. These new approaches stress the importance of the agency of children and youth. To say children have agency means they are active participants in their own socialization rather than being simply shaped or molded by adults. Such approaches also focus on how children collectively produce "peer cultures," which play a key role in their life trajectories and transitions as they become active members of adult culture. There has also been a convergence in theories of human development and socialization that is complementary to important theory and research on the life course (Corsaro & Fingerson, 2003).

## THEORETICAL APPROACHES TO HUMAN DEVELOPMENT AND SOCIALIZATION

Theories of human development in psychology are primarily concerned with the individual child's acquisition of skills and knowledge and general adaptation to the environment. Sociologists, by contrast, normally use the term *socialization* when discussing human development. Their definitions of socialization highlight the ways in which the individual learns to fit into society. Some sociologists give more agency to children than others, but all emphasize interaction and collective processes when discussing socialization and argue that it is a lifelong process. Gerald Handel, Spencer Cahill, and Frederick Elkin (2007) defined socialization as "*the processes by which we learn and adapt to the ways of a given society or social group so as to adequately participate in it*" (pp. 2–3).

In the 1980s and 1990s, important changes occurred in the conceptualization of human development and socialization in psychology and sociology. In general, these changes involved more of a focus on agency in the socialization process, more concern for the importance of social context, and agreement that experiences beyond the early years in the family (especially interactions and experiences with peers) are in need of careful theoretical development and empirical research.

## RECENT TRENDS IN PSYCHOLOGICAL THEORIES OF HUMAN DEVELOPMENT

As noted earlier, psychologists use the term *human development* rather than *socialization*. Psychological theories of human development vary regarding (a) their perception of individuals as active or passive; (b) the importance they place on biological factors, the social environment, and social interaction; and (c) their conception of the nature of development or change. Three theoretical approaches have important implications for sociological approaches to socialization because they recognize the importance of the collective activities and processes of children and youth in social context and over time.

**Cognitive Developmental Theory** Since the early 1990s, work in cognitive development theory as centered around refinements and extensions of Jean Piaget's (1950) theory of intellectual development, which advocates an active view of the child who constructs his or her own place in the social and physical world. Several theorists argue that early interpretations of Piaget's work concentrate on the details of stages in cognitive development at the expense of an understanding of the theory they were intended to illustrate. Geoffrey Tesson and James Youniss (1995) argued that although Piaget described a series of stages of cognitive development he believed all children progress through, he did see these stages as the central focus of his theory. In his later work Piaget investigated the interrelationship between the logical and the social qualities of thinking. Tesson and Youniss argued that Piagetian

intellectual operations enable children to make sense of the world as a set of possibilities for action, and thereby they can build a framework within which these possibilities may be envisioned. Thus Piaget attributes agency to children. Piaget also believed that children's peer relations were more conducive to the development of intellectual operations than the authoritative relations with adults, which primarily involved parental constraint over children, rather than a mutually influential and equal relationship.

**Systems Theories of Human Development** An excellent example of dynamic systems theory can be seen in the work of Esther Thelen and Linda Smith (1998), who criticized studies of human development that strive to discover invariants, that is, the programs, stages, structures, representations, schemas, and so on that underlie performance at different ages. Thelen and Smith argued that this approach uses the metaphor of a machine and that "knowledge is like the unchanging 'innards' of the machine, and performance subserves the more permanent structure" (p. 568).

Thelen and Smith (1998) offered instead the image of a mountain stream to capture the nature of development. They noted that there are patterns in a fast-moving mountain stream: Water flows smoothly in some places, but nearby there may be a small whirlpool or turbulent eddy, whereas in other parts of the stream there may be waves or spray. These patterns may occur for hours or even days, but after a storm or a long dry spell, new patterns may emerge. The mountain stream metaphor captures development as something formed or constructed by its own history and systemwide activity. In this approach there is a direct focus on processes, and outcomes are important primarily as part of further developing processes. The key strength of Thelen and Smith's systems approach is that it captures the complexity of real-life human behavior in physical, social, and cultural time and context.

**Sociocultural Theories** Sociocultural theorists refine and extend central concepts in the work of the Russian psychologist Lev Vygotsky (1978). According to Vygotsky, human activity is inherently mediational in that it is carried on with language and other cultural tools. A significant portion of children's everyday mediated activities take place in the zone of proximal development: "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

Building on Vygotsky's (1978) work, Barbara Rogoff (1996) argued that changes or transitions in children's lives can be best examined by asking how children's involvements in the activities of their community change, rather than by focusing on change as resulting from individual activity. To capture the nature of children's involvements or changing participation in sociocultural activities, Rogoff suggested they be studied on three different planes of analysis: the community, the interpersonal, and the individual. In line with this view of change, Rogoff introduced the notion of "participatory appropriation" by which she means that "any event in the present is an extension of previous events and is directed toward goals that have not yet been accomplished" (p. 155). Thus, previous experiences in collectively produced and shared activities are not merely stored in memory as schema, plans, goals, and such and called up in the present; rather, the individual's previous participation contributes to and prepares or primes the event at hand by having prepared it.

Rogoff (1996) demonstrated this concept in a study of preadolescent girls' participation in the sale and delivery of Girl Scout cookies. The mothers of the girls initially managed and directed the interrelated tasks involved in this activity such as taking orders, calculating prices, and actually delivering the cookies. Over the course of time, however, the girls became more centrally involved and in some cases actually took over tasks (such as calculating prices) and played key roles (such as giving their mothers driving directions) as the mothers helped the girls deliver the cookies.

## SOCIOLOGICAL THEORIES OF SOCIALIZATION AND THE SOCIOLOGY OF CHILDHOOD

As noted earlier, when discussing human development, sociologists normally use the term *socialization*. Since the 1980s, however, there has been a movement to refine or even replace this term in sociology because it has an individualistic and forward-looking connotation that is inescapable (Corsaro, 2005; Thorne, 1993). Some offer instead interpretive-reproductive theories that present a new sociology of children and childhood in which children's own cultures are the focus of research, not the adults they will become. These new approaches are refinements of earlier theoretical work on socialization in sociology.

**Macro-Level Approaches to Socialization** The major spokesperson of the macro-level view of socialization is the functionalist theorist Talcott Parsons, who envisioned society as an intricate network of interdependent and interpenetrating roles and consensual values. Parsons and Robert Bales (1955) likened the child to "a pebble 'thrown' by the fact of birth into the social 'pond'" (pp. 36–37). The initial point of entry—the family—feels the first effects of this "pebble," and as the child matures the effects are seen as a succession of widening waves that radiate to other parts of the social system. In a cyclical process of dealing with problems and through

formal training to follow social norms, the child eventually internalizes the society. The influence of functionalist theorists has waned given their overconcentration on outcomes of socialization, deterministic views of society, and underestimation of the agency of social actors.

A recent and innovative macro-perspective of childhood can be seen in the work of Jens Qvortrup (1991), whose approach was based on three central assumptions: (a) Childhood constitutes a particular structural form, (b) childhood is exposed to the same societal forces as adulthood, and (c) children are themselves co-constructors of childhood and society. By childhood as a social form, Qvortrup means it is a category or a part of society such as social class, gender, and age groups. In this sense children are incumbents of their childhoods. Because childhood is interrelated with other structural categories, the structural arrangements of these categories and changes in these arrangements affect the nature of childhood. In modern societies, for example, changes in social structural arrangements of categories such as gender, work, family, and social class have resulted in many mothers working outside the home and their children both taking on more household work and spending more of their time in institutional settings, such as day-care centers and after-school programs, that did not exist in the past.

At a more intermediate level, analysis of socialization processes can be seen in work on social structure and personality and the life course. This work often escapes the deterministic nature of traditional macro-theories by documenting how specific features of social structure affect interaction in various contexts of socialization. For example, Elder (1994) argued that transitions in the life course are always embedded in trajectories that give them a distinct form and meaning. The life course approach, thus, overcomes the static nature of cross-sectional studies and captures the complexity of socialization across generations and key historical periods.

**Interactionist Approaches to Socialization** Interactionist approaches stem primarily from the social philosophy of George Herbert Mead (1934). Mead saw the genesis of self-consciousness as starting with the child's attempts to step outside him or herself by imitating others and reaching completion when the child, through participation in games with rules, acquires the ability to take on the organized social attitudes of the group. In Mead's stages in the genesis of self, however, children acquire more than a sense of self; they also appropriate conceptions of social structure and acquire a collective identity.

Surprisingly there has been little research by symbolic interactionists on early socialization. In one exception, Norman Denzin (1977) studied early childhood and argued that socialization "from the standpoint of symbolic interactionism, represents a fluid, shifting relationship between persons attempting to fit their lines of action together into some workable, interactive relationship" (p. 2). From this perspective, Denzin studied the worlds of childhood in the preschool and family. In the family, for example, Denzin documented how parents incorporated their young children into shared discourse by responding to their gestures and vocalizations as meaningful communications. However, there has been no real research tradition or theoretical innovation on children and childhood from Denzin's work.

Other symbolic interactionists have been more persistent in theoretical and empirical work on preadolescents. Gary Fine (1987), for example, studied Little League baseball and identified how, over the course of a season, boys through their collective activities taught each other about morals, emotional expression and control, and language routines only indirectly related to the sport. Patricia Adler and Peter Adler (1998) identified clear status groups and cliques among elementary school children and how the clique dynamics varied across groups. Somewhat surprisingly, the members of the popular clique were visible but not always well liked, and the competition within the group worked against close friendships.

**Interpretive Approaches to Children's Socialization and the New Sociology of Childhood** Central to the interpretive view of socialization is the appreciation of the importance of collective, communal activity—how children negotiate, share, and create culture with adults and each other. In line with these assumptions regarding interpretive collective activity, William Corsaro (2005) offered the notion of *interpretive reproduction*. The term *interpretive* captures innovative and creative aspects of children's participation in society. Children produce and participate in their own unique peer cultures by creatively appropriating information from the adult world to address their own peer concerns. The term *reproduction* captures the idea that children do not simply internalize society and culture but also actively contribute to cultural production and change. The term also implies that children are, by their very participation in society, constrained by the existing social structure and by social reproduction.

Interpretive reproduction views children's evolving membership in their culture as reproductive rather than linear. According to the reproductive view, children and youth strive to interpret or make sense of the adult culture, and in the process they come to produce their own peer cultures (Corsaro, 2005; Eder, 1995). Appropriation of aspects of the adult world is creative in that it both extends or elaborates peer culture (transforms

information from the adult world to meet the concerns of the peer world) and simultaneously contributes to the reproduction of the adult culture.

Corsaro (2003) pointed to children's dramatic role play as an instructive example of interpretive reproduction. In role play, children do not simply imitate the adult model but appropriate and embellish it to meet the interests, values, and concerns of their peer cultures. Corsaro documented complex differences in the dramatic role play of the upper-middle class compared to that of economically disadvantaged preschool children. The upper middle class children created an ice cream store in their private preschool where they portrayed themselves as owners of the store, invented a type of ice cream that would not melt in the hot sun, and decided to donate some of the money from their store to help sick kids pay their hospital bills.

The economically disadvantaged kids (attending a Head Start center) created a role-play event in which they pretended to be their mothers having a telephone conversation about the difficulties of parenting in poverty. They discussed how their children wanted them to take them to the store when there were no large grocery stores in the neighborhood and to the park. The girls talked about the difficulties of transportation to faraway stores and safe parks when the local bus system was slow and demanded transferring from one bus to another to get to the desired destination—a problem few middle-class families face. Although the complexities of both role-play events were impressive in regard to the children's cognitive and communicative skills, it was clear that the predispositions of the middle-class children were optimistic and confident, whereas those of the economically disadvantaged children displayed a sobering recognition of their challenging futures.

**SEE ALSO** Volume 1: *Developmental Systems Theory; Elder, Glen H., Jr.; Identity Development; Interpretive Theory; Piaget, Jean; Social Development; Socialization, Gender; Socialization, Race;* Volume 2: *Roles*

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# SOCIALIZATION, GENDER

Individuals must learn the *culture* of the society in which they live—the ways of life, beliefs, values, behaviors, and symbols—to have the shared knowledge necessary to interact with others meaningfully. Using a life course perspective, culture is acquired through the ongoing process of socialization during which people first learn broad elements of the culture such as values and beliefs

from the family and continue to learn the expectations and appropriate behaviors associated with particular social settings such as school and work from peers and coworkers. However, the socialization experience is not the same for everyone and the specific information transmitted to individuals through socialization can differ according to their race, socioeconomic status, and gender.

## DEFINING SOCIALIZATION

The contemporary notion of socialization is a combination of ideas from psychology, sociology, anthropology, and human development. Some of these academic orientations, such as sociology, have traditionally emphasized the actions of external groups in the socialization process and stress the perpetuation of culture from one generation to another through social institutions such as the family, educational system, religion, and government. Other orientations, such as psychology, emphasize the individual's reaction to the information received through socialization. At this individual level, socialization leads to three outcomes. First, people internalize the values of their society that define what is good and desirable. Secondly, *social norms*, the rules that guide behavior, are learned. And third, people learn appropriate *roles*: the patterns of behavior attached to recognized positions in society such as son, daughter, husband, wife, or boss.

These dissimilar emphases on either the external processes or internal outcomes have actually served to make socialization an increasingly generic and ambiguous conception. So many different processes have been discussed under the heading of socialization that the concept has been critiqued for lacking a concise and authoritative meaning. Noting this ambiguity, socialization can generally be defined as both the external procedures by which the beliefs and appropriate behaviors of a society are conveyed to individuals and the internal processes resulting in the internalization of societal values, norms, and roles.

## SOCIALIZATION AND GENDER

Gender is a very important component in the socialization process. Throughout the entire life course, people experience differential treatment and expectations depending on their sex. Boys and girls are encouraged by their parents, teachers, and friends to exhibit the behaviors and traits traditionally considered to be gender-appropriate. Eventually, individuals develop self-concepts based on the social meaning associated with their sex.

Whereas *sex* is usually used to describe the biological distinction between males and females determined by sex organs and genes, *gender* refers to a cultural distinction having to do with the attributes and traits thought to be related to each sex. A child's sex develops in the womb before birth, but gender is learned in a social context. Depending on the level of analysis, gender can involve both *gender roles*: society's notion of appropriate masculine or feminine behavior and attitudes, and *gender identity*: individuals' subjective feelings of themselves as male or female.

Gender roles are passed down from one generation to another through socialization and many of the attributes and behaviors considered to be innately male or female are largely determined by the society in which one lives. All societies have *gender stereotypes*: widely held sets of beliefs regarding the personal traits of men and women (Williams & Best, 1990). In U.S. society, males are commonly ascribed instrumental traits and are considered to be assertive, aggressive, independent, competent, and logical, whereas females are characterized as passive, warm, caring, submissive, and emotional.

Gender stereotypes can vary between societies depending on if perceived differences between the sexes are emphasized or minimized. Margaret Mead (1963) conducted a classic and pioneering study illustrating cultural variations in gender roles with three tribes in New Guinea. Among the members of the Arapesh tribe, both men and women exhibit qualities that U.S. society would define as being traditionally feminine: warmth, cooperation, and nurturance. In the Mundugumor tribe, both sexes have the traditionally masculine characteristics of anger and aggression and in the Tchambuli tribe, traditional gender roles are reversed with females being dominant and males being submissive and emotional. Even though the accuracy of some of Mead's conclusions have been questioned, her early research has inspired studies to focus on the social definitions of gender-appropriate behavior.

Just as gender stereotypes can differ between societies, variability can also exist within the same society depending on factors such as sex, race, and social class. Past research has found that boys have stronger gender-stereotypical views than girls as children and are more likely to conform to their gender role. African-American adults have been found to endorse greater gender equality than whites. Additionally, middle-class adults have more flexible gender-stereotypical views than individuals from the working class (for a more in-depth discussion of gender and a review of research findings, see Wharton, 2005).

## MAJOR THEORETICAL APPROACHES TO STUDYING SOCIALIZATION

*Socialization* is a concept that bridges the gap between social experience and the development of individual personality. Three major theoretical approaches exist for

studying socialization. Scholars with more social orientations have drawn largely from structural functionalism to highlight the structural dimensions and processes related to how people are socialized by other individuals and social groups. Structural functionalist approaches generally hold that societies are composed of complex social structures, such as families, the government, and the economy that function interdependently to promote stability and ensure continuation of the society (i.e., Parsons, 1951). The purpose of socialization is to transmit components of culture to new generations and to train individuals for their social roles. Therefore, conforming to the norms of society is necessary for the stability and the effective functioning of society.

Conversely, scholars with more individualistic orientations have used symbolic interaction theories to emphasize personal experiences in the socialization process and how social values and norms become part of identity. Symbolic interaction approaches focus much more on the individual and assume that people actively construct their own realities and self-concepts through interactions with others in specific social settings (i.e., Mead, 1962 [1934]). The self, therefore, develops through social activity and socialization. Symbolic interactionism stresses that socialization is a dynamic interactive process in which individuals adapt information to their specific needs (for an accessible overview of both theories see Ritzer & Goodman, 2004).

A third, developmental approach to studying socialization encompasses numerous different theories such as psychoanalytic, social learning, and cognitive development to explain how early social experiences influence personality. The theories included in this approach are the most focused on individual processes. The psychodynamic theory of Sigmund Freud (1856–1939)—and the extensions by Erik Erikson (1902–1994), Harry Stack Sullivan (1892–1949), and Alfred Adler (1870–1937)—address how the components of personality form and illustrate the specific mechanisms used to internalize social norms and expectations. Additionally, the constructivist theories of Jean Piaget (1896–1980) and Lev Vygotsky (1896–1934) deal with how individuals develop higher mental functioning by actively engaging their environment and interacting with others. Many of these theories have greatly informed the study of socialization and have been used to explain the development of gender identity; however, they are too varied to be adequately discussed at length in this entry (for more information see Miller, 2002).

## AGENTS AND PROCESSES OF SOCIALIZATION

Numerous social experiences and interactions with others have the potential to affect beliefs and behaviors. However, certain groups in a society are much more influential than others. These *agents of socialization* are those groups that teach the important social norms and values that eventually become part of individual self-concept, including what is considered to be gender-appropriate behavior.

Agents socialize individuals through numerous processes. At the societal level, the *processes of socialization* are activities and actions of external groups that transmit societal norms and values to an individual such as direct instruction, modeling the appropriate behavior, rewarding proper behavior, and discouraging unacceptable behavior. However, socialization processes can also be analyzed at the individual level and can include individuals' behavioral responses and internal reactions to the socialization they receive such as attending to the instruction, imitating, remembering the lesson, and accepting or rejecting the value.

**The Family** The family is widely considered to be the most important agent of socialization. Because parents are more likely to follow what is considered to be appropriate parental roles for the culture in which they live, families serve to transmit the values of the society as a whole through their parental practices (Arnett, 1995). Additionally, each family is characterized by a specific ethnicity, income level, social class, religious belief, and political orientation that help to determine how children will be raised.

Differential treatment by parents can establish different expectations for behavior and teach young children much about gender. However, a review of the research conducted in North America has found that the only consistent difference in parental treatment between boys and girls is the encouragement of sex-typed play activities such as offering dolls to girls and balls to boys (Lytton & Romney, 1991). Of course, any differences in treatment between boys and girls in a specific family could also depend on factors such as the race and social class of the parents as well as the parents' ideas about appropriate gender roles.

**School and Work** Schools are formally responsible for teaching children the knowledge and skills needed to participate in society. However, the belief system of the larger society greatly influences the structure and culture of schools. Aside from academic lessons, schools also teach the norms, values, and socially appropriate behaviors of the society. Children learn numerous unintended lessons through this *hidden curriculum*. For instance, because students are counted as tardy if they are not in class by a certain time, they learn that punctuality is important. Additionally, the competitive nature of

activities such as spelling bees, science fairs, and extracurricular sporting events teach children to value success.

Teachers also continue the instruction about gender-appropriate behavior that children first receive from their parents. Boys are given more attention and praise than girls (Sadker & Sadker, 1994). Additionally, teachers are more likely to praise boys for their knowledge, but praise girls for obedience and following the rules. These differences in treatment further reinforce separate expectations for boys and girls and establish different standards of acceptable behavior.

In adulthood, the work setting replaces school. Instead of a teacher, most people work under the authority of a boss and hard work is rewarded with money instead of grades. Workers learn to adopt a strong work ethic and can eventually see their job as an important part of their identity.

**The Peer Group** A peer group is a collection of individuals who regularly interact, share similar interests, and are approximately the same age. For younger children, peer groups normally include nearby neighborhood playmates. Later, peer groups are composed of more distant acquaintances as preteens and adolescents make friends in school and join peer groups according to similar interests and concerns about social status. Whereas relationships with family members remain important, the significance of peers increases during the school years and become especially significant during adolescence.

Unlike the family or the school, the peer group provides children with a much more interactive context in which the meaning of gender is learned and reinforced. However, peers generally expect conformity to gender stereotypes and discourage others from nonappropriate behavior. Eleanor Maccoby (1998) details how boys and girls segregate themselves into same-sex play groups at an early age and learn different styles of interaction. Boys are more physical, competitive, and physically aggressive. Girls play in smaller groups, tend to be more cooperative, engage in taking turns during play, and express greater self-disclosure to each other. The different styles of interaction reinforced by each group help further socialize boys to be more independent and dominant whereas girls learn the importance of maintaining relationships.

**Mass Media** The mass media are different forms of communication directed to a very large audience and includes television, movies, radio, magazines, and the Internet. Public exposure to the mass media is considerable and has been increasing since the beginning of the 20th century due largely to technological innovations in the middle and latter parts of that century (such as the wide sales of televisions after World War II, ca. 1946–1955), and the development of the World-Wide Web). Even if not intended by the producers, numerous messages presented by the media can teach values, beliefs, and ideologies.

Studies suggest that gender role perceptions and attitudes are affected by television programs and commercials that generally portray men in positions of authority and women as subordinate. Erving Goffman (1979) found that in magazine and newspaper advertisements, men were positioned in front of women or pictured as being taller than women whereas women were more likely to be in positions of subordination such as lying down or being seated on the floor. More recent research has supported Goffman's findings (i.e., Cortese, 1999), and even newer forms of media continue this traditional portrayal of men and women. For example, video games under-represent female characters and often portray them as sex objects.

**Cohort Differences in Socialization** Societies can be conceptualized as collections of various stratified groups based on factors such as gender, race, and socioeconomic status. However, societies are also composed of a number of *cohorts*: groups of people born during approximately the same time period. Values and beliefs can differ among cohorts depending on the socialization they received at a specific time. But as individuals in a cohort grow older, they also share a unique set of historical life experiences that have the potential to alter the initial beliefs and values learned through socialization (Settersten & Martin, 2002). This is especially true when the effects of a particularly important generation-defining historic event are experienced (e.g., the Great Depression in the 1930s, World War II with U.S. involvement from 1941–1945, or the counterculture movement of the 1960s). In turn, the new values and beliefs of the cohort will be transmitted to the next generation through socialization.

For example, a woman born in the 1920s would have experienced very different gender socialization than a woman born in the 1970s. Whereas significant differences in gender socialization could be expected depending on variables such as social class and race, many women born in the late 1920s would have probably been told that a woman's place was in the home, would have been discouraged from seeking employment, and would have been expected to get married and have children. Yet in their late teen years, this cohort would have experienced America's entrance into World War II during the early 1940s and witnessed the large numbers of women who contributed to the wartime effort by working in previously male-dominated professions. As a result of living through and possibly even participating in these events,

some members of this cohort may have changed their ideas about the capabilities of women and subsequently taught their children an expanded notion of the appropriate behaviors and attitudes for women.

The children of this late 1920s cohort would have been born after World War II (the so-called Baby Boom). In turn, this new cohort would have experienced the Vietnam War and the counterculture movement. The gender role socialization that the Baby Boom generation provided to their children would probably be significantly affected by the women's movement of the 1960s and the resulting legislative changes banning sexual discrimination such as Title IX (outlawing sexual discrimination in any educational program or activity that receives federal funds). Additionally, the children of the Baby Boomers, born beginning around the mid-1970s (Generation X), would witness more and more of their mothers seeking employment outside of the house. Seeing this expansion of the homemaker role for women could have an influence on the messages about gender that this generation provides to their children. This greatly abbreviated review of the major historical events occurring over just three generations illustrates how radically different gender socialization could be for an individual born in 1930 and a member of Generation X born in the 1970s.

## FUTURE DIRECTIONS

A review of the main theoretical approaches to socialization and previous research findings illustrate socialization as a multifaceted process. Gender socialization, in particular, is especially complex given the potential influence of numerous social and temporal variables. Trends in socialization research indicate that scholars are noting the influence of societal change on socialization patterns and are envisioning individuals as more active agents in their own socialization. Future research can be expected to continue along these trajectories with more of a focus on the individual and the effects of social change.

Societies are not static and at least some degree of change is inevitable. Whereas many theorists and researchers have stated the importance of the family as an agent of socialization, the nature of the traditional family is changing. Numerous couples divorce, more children are being born into cohabitating unions, more mothers are working, and more single women are the heads of their own households. Future research could investigate if witnessing these changes in the traditional homemaking compared with breadwinning roles is related to children's notions about the appropriate gender roles of men and women. Additionally, research could also explore if witnessing these changes affect girls and boys similarly.

Research can also be expected to continue focusing on individuals as more active participants in their own socialization. With increasingly interactive forms of media such as the Internet and with so many entertainment choices offered by the multitude of channels on cable and satellite television, people can choose media that supports their already established notions of appropriate gender roles. Future research may explore the processes and mechanisms involved in how people choose the media they consume instead of the effects of the media on individual conceptions of gender.

**SEE ALSO** Volume 1: *Gender and Education; Identity Development; Media Effects; Peer Groups and Crowds; Social Development; Socialization, Race;* Volume 2: *Body Image, Adulthood; Parent-Child Relationships, Adulthood;* Volume 3: *Cohort.*

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***Kurt Gore***

## SOCIALIZATION, RACE

*Socialization* is the lifelong process through which norms and expectations are transmitted among people in order to create stability in society through consensus. Agents of socialization can be individuals, groups, or institutions. These agents are constrained by cultural conditions and political forces such that socialization generally supports the status quo. In a certain sense then, socialization is conservative in nature because deviance from the status quo is discouraged. The content of socialization messages transmitted relates directly to the developmental stages (e.g., child, youth, adolescent, young adult, or adult), roles (e.g., son, teacher, student, mother, professor, or politician), and ascribed and achieved statuses (e.g., race, gender, or socioeconomic status) of individuals being socialized.

*Race socialization* is the lifelong process through which the social meaning and consequences of race and racism are transmitted (Brown, Tanner-Smith, et. al, 2007). Through this process, individuals learn about physical differences, history and heritage, identity politics, and/or prejudice and discrimination (Chesire, 2001; Hughes, Rodriguez, Smith, et. al, 2006; Lesane-Brown, 2006). Children and adolescents of color are the central focus in the literature because families of color are the agents of race socialization predominantly studied. More specifically, most studies focus on Black families. This is so because race socialization research started with attempts to explain how Black children could form and maintain positive self-concepts despite their in-groups' marginalized status in the U.S. racial hierarchy (Hughes et al, 2006). Familial race socialization continues to be deemed essential for the healthy development of Black children because it initiates a watershed experience after which Black children develop racial identity and become conscious regarding the nature of racial intolerance. Racial identity and consciousness are necessary for success in contexts such as the United States, where non-white physical features remain an impediment to social and upward mobility. Along those same lines, recognition that the lives of other U.S. racial minority groups are similarly shaped by racial hierarchy began during the 1990s (Hughes et al, 2006). In response, scholars began asking whether racial minorities other than Blacks socialize their children regarding race and racism (Aboud, 1988; Brown et al, 2007).

Parents raising White children teach them about race and racism too, yet are virtually neglected in discussions regarding the race socialization process because Whites define the norm. In addition, the goals of White families' teachings may differ from the goals of parents raising children of color. One study suggests that in White families the main objective of race socialization is to promote White children's tolerance of diversity (Katz & Kofkin, 1997). In contrast, another study finds that most White parents are indifferent toward socializing their children regarding interracial relations (Hamm, 2001). Although it probably has differential meaning within non-White and white families, race socialization occurs in all families rearing children and thus is universal.

### TERMINOLOGY

Hughes, Rodriguez, Smith, Johnson, Stevenson, and Spicer (2006) suggest using the term *ethnic-racial socialization* when referring to the broad research literature. Unfortunately, some scholars use the term *ethnic socialization* when referring to, for example, *both* Blacks and African Americans, confounding race with ethnicity. In response, the present authors prefer the term *race socialization* when describing socialization processes involving U.S. racial group members of various ethnicities (e.g., Whites, Blacks, Hispanics, Asians, Native Americans, or multiracial individuals) and *ethnic socialization* when describing U.S. ethnic groups of various races (e.g., Irish Americans, Cuban Americans, Jamaican Americans, Jews, Mexican Americans, Japanese Americans, or Hopi Indians). Clearly race socialization and ethnic socialization might overlap, but in some cases one is present without the other. For reasons of clarity and parsimony, the authors use the term *race socialization* throughout the remainder of this entry.

### WHY SOCIALIZE CHILDREN TO RACE

Brown, Tanner-Smith, Lesane-Brown, and Ezell (2007) theorize that there are three reasons families tend to socialize young children to race and racism: (a) the context in which the child lives exposes him or her to diversity; (b) some families are facile at communicating with children regardless of topic; and (c) the child is being prepared for membership in a marginalized racial minority group. An additional reason is that: (d) families desire to pass down traditions and customs. The first reason suggests that everyday life exposes the child to opportunities to learn about racial diversity. Indeed, research indicates that children, some as young as six months, recognize and react to differences in physical features (Katz & Kofkin, 1997). Second, in families where warmth characterizes interactions, children feel loved and probably discuss many topics with family members, race and racism among them (Aboud, 1988). The third reason is that race socialization prepares children of color to live successfully in an often hostile context (Lesane-Brown, 2006). The fourth reason deals with preservation of collective memory as some families

***Lunchtime.*** *Muslim schoolchildren select from traditional Middle Eastern foods.* © GIDEON MENDEL/CORBIS.

pass in-group traditions and customs down to the next generation (Chesire, 2001).

## THEORETICAL APPROACHES

There are five theoretical approaches that may be helpful for understanding the meaning and significance of the race socialization process: (a) social cognitive learning theory, (b) the life course perspective, (c) ecological theory, (d) racial identity theory, and (e) the social capital perspective. Connections among these theories are reflected in the centrality each assigns to meaning-making during interpersonal and group interactions.

*Social cognitive learning theory* is useful for understanding ways families teach children about race and racism. Broadly, this theory predicts how children come to think and behave in normative fashion at particular developmental stages, asserting that socially acceptable behaviors are learned through discussions, observation, modeling, vicarious reinforcement, and imitation of significant others (Bandura, 1977). Through these mechanisms, children learn about race and racism, and how to respond in race-related situations. For example, Chesire (2001) describes common practices (e.g., listening, telling, watching, and observation) related to transmission of cultural knowledge among American Indian women and their families. Children play an active role in this process because they must actively attend to their parents' messages, encode what they are hearing or observing, reject or store this new information in memory, and then retrieve this information at some later time (Bandura, 1977).

*Life course perspective* (Alwin, 1995; Elder, 1994) is useful because it describes how individuals' lives are shaped by social change. This perspective links agency, social conflict and change, individual development, and biography across various life domains including work, family, and health. In terms of the race socialization process, the life course perspective suggests that family communication about race and racism are contoured by historical time. The perspective acknowledges that parents' race socialization practices must adapt to fluctuations in cultural conditions and political forces in anticipation of when their children will come of age. Consequently, messages transmitted to one generation of children may be different than those transmitted to another generation (Brown & Lesane-Brown, 2006).

*Ecological systems theory* (Bronfenbrenner, 1979) defines several concentrically and temporally arranged levels of the environment (i.e., microsystem, mesosystem, exosystem, macrosystem, and chronosystem) that simultaneously interact to influence social development. Positioned at the center of these levels of the environment is a child who is influenced by and proactively influences the surrounding environment. In part, these environments determine when, how, and why parents racially socialize their children (Lesane & Brown, 2006). Ecological systems theory represents the causative layering of levels. More specifically, the theory addresses how multiple levels and socializing agents interrelate to influence individuals, and is truly social psychological in formulation (i.e., suggesting reciprocity between macro and micro levels).

*Racial identity theory* (Katz & Kofkin, 1997) views race socialization as the requisite precursor to development of racial identity. Racial identity represents a sense of attachment to a collective and imagined community of similar others. The sense of attachment provides purpose and an inter-subjective definition of the situation. Scholars theorize that race socialization is therefore psychologically affirming to children of color because it concretizes their emergent self-schemas—defined as organized, affective, coherent, and integrated generalizations about self and relationship of self to others in the in-group and out-group (Oyserman, et. al, 2003).

*Social capital perspective* (Putnam, 2000) defines social capital as an intangible resource that facilitates certain outcomes for actors within a social structure or an intangible resource that creates value through meaningful social relations within a social network. Scholars have neglected how the race socialization process creates two forms of social capital. First, race socialization encourages "bridging" social capital, formed of inclusive networks that encompass people across diverse social cleavages (e.g., region, socioeconomic status, or historical time) including members of one's racial group (Katz & Kofkin, 1997; Putnam, 2000). Second and simultaneously, race socialization encourages "bonding" social capital because it reinforces exclusive identities and homogeneous groups, framing racial identity as distinct from other identities (Oyserman et al, 2003).

## EMPIRICAL RESEARCH

Most race socialization research focuses on the *content* of parental messages transmitted (Hughes et al, 2006). In these studies the research question has typically been: What are the specific things that parents say to teach their children about race and racism? Message content is usually divided into four broad categories: (a) racial pride and teachings about cultural heritage, traditions, and values; (b) awareness of and preparation for racism and discrimination; (c) equality and coexistence among racial groups; and (d) the importance of life skills, citizenship, and individualism.

*Prevalence* assesses the proportion of parents that transmit race socialization messages. Research indicates that a larger proportion of parents raising non-White children practice race socialization as compared to the proportion of parents raising White children (Brown et al., 2007).

*Frequency,* which includes information such as persistence and accumulation that is obscured in studies of prevalence alone, assesses how routinely race socialization occurs. The frequency in which parents transmit race socialization messages may vary depending upon the content of the message. For instance, child and adolescent studies conducted since the 1980s have found that Black parents transmit messages regarding racial pride and heritage, and equality among racial groups more frequently than any other message (Hughes et al., 2006).

Several *predictors*—related to the child (e.g., age, gender, and race), parent (e.g., gender, education, income, marital status, discrimination experience, relationship with child, and racial identity), and situation (e.g., child school characteristics, neighborhood demographics, and region of residence)—are associated with whether (prevalence) and how often (frequency) parents transmit race socialization messages as well as the content of messages transmitted. For example, a nationally representative study comparing preschool-aged children found that families living in the West and families rearing American Indian children are likely to frequently teach children about their ethnic/racial heritage (Brown et al, 2007). Historical time is also emerging as an important situational predictor of race socialization, in the sense that appropriate race socialization depends upon cultural conditions and political forces (Brown & Lesane-Brown, 2006).

Regarding *outcomes,* several studies support the hypothesis that receiving race socialization messages in general and receiving group membership and pride messages in particular promote affirming racial identity structures, protection from internalizing negative racial stereotypes, positive academic orientations and outcomes, and positive psychosocial outcomes (Lesane-Brown, Brown, Caldwell, et. al, 2005). In addition, race socialization may act as a buffer against perceived experiences of discrimination. In contrast, messages emphasizing awareness of and preparation for racism and discrimination transmitted to children of color show inconsistent effects. Some studies suggest such messages are associated with positive psychosocial and academic outcomes, whereas others suggest these messages lead to negative academic outcomes, poor psychosocial functioning, and

distrust of individuals outside one's racial group (Lesane-Brown, 2006). Little is known regarding implications of receiving messages that emphasize equality among racial groups or that deemphasize race and racism while touting individualism.

## MEASUREMENT

Disagreement exists about what constitutes a reliable and valid measure of race socialization (Lesane-Brown et al, 2005). Some measures use open-ended questions to assess message content, whereas others use close-ended questions. Some measures are considered multidimensional and scalable, whereas others are not (Lesane-Brown et al, 2005). Some measures include few message content categories, whereas others include several.

Throughout the 1980s to late-2000s, race socialization measures that assess message content and frequency have dominated the literature, but there is progress toward more comprehensive assessment. In fact, Lesane-Brown, Brown, Caldwell, and Sellers (2005) developed an inventory that moves the field in that direction. In addition to capturing message content and frequency, their inventory, the Comprehensive Race Socialization Inventory (CRSI), examines neglected components of the race socialization process such as: onset and recency, the most useful message, multiple sources (i.e., agents of socialization), anticipatory socialization messages, and socializing behaviors.

## FUTURE DIRECTIONS

The United States is becoming a more diverse and arguably more divided nation. Long-standing divisions relate to immigration, region of residence, religion, socioeconomic disparity, language, political orientation, and so on. What is interesting about these divisions is the extent to which they are racialized and to which individuals claiming specific racial backgrounds tend to represent particular positions. Given this, it is no wonder the race socialization process intrigues many scholars. To improve scholarship on the topic, it is particularly important to understand the history of race socialization research and where current research trends are headed. If one anthropomorphizes the race socialization literature, then she is currently an adolescent, experiencing excitement, amazing growth, and turmoil.

The following suggestions are offered to help facilitate her transition from adolescence to young adulthood. First, the race socialization literature needs studies that examine dynamism in the race socialization process (e.g., demonstrating whether message content is internalized or rejected). Second, because parents are but one of numerous socialization agents at work over the life course, scholars must examine how messages from multiple sources (including family, friends, the media, schools, or religious organizations) interact with one another to shape paradigms of children, youth, adolescents, young adults, and adults (Lesane-Brown et al, 2005). Third, long-term longitudinal, life course–inspired research designs are needed to reveal how early-life race socialization experiences link to older adults' conceptions regarding race and racism. Fourth, because there is little consensus regarding measurement of race socialization, studies that incorporate multiple measures and compare results are to be welcomed. In addition, rather than relying solely on self-report measures, scholars should employ multi-method approaches (such as use of observational measures, diaries, or vignettes) to investigate the race socialization process. Finally, more multi-generational studies of families are needed. These are particularly informative in terms of triangulating perspectives of socialization agents with those that they are intending to socialize.

**SEE ALSO** Volume 1: *Identity Development; Media Effects; Oppositional Culture; Parent-Child Relationships, Childhood and Adolescence; Peer Groups and Crowds; Racial Inequality in Education; Socialization, Gender;* Volume 2: *Ethnic and Racial Identity; Parent-Child Relationships, Adulthood.*

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# SOCIOECONOMIC INEQUALITY IN EDUCATION

Family background is consistently found to be related to educational outcomes such as grades, test scores, school dropout, and educational-degree attainment. Researchers often study the relationship between socioeconomic status (SES) and education. The term *socioeconomic status* often is used to describe the hierarchical arrangement of individuals and families on the basis of the social and economic factors that are rewarded in society. Although there is no consensus about the best way to measure SES in empirical studies, individual or family SES often is measured by three attributes: parents' income, education, and occupation. Studies using these individual-level measures of SES find that students from higher socioeconomic backgrounds tend to have higher test scores, lower rates of school dropout, and higher rates of postsecondary school enrollment and completion. Research on socioeconomic inequality also emphasizes the characteristics of a child's school and/or neighborhood, suggesting that it is not just the SES of individuals that matters but also the average socioeconomic level of all the individuals in the community. Schools with lower percentages of students eligible for free or reduced-price lunches have higher proportions of high school graduates, as do schools in districts with lower poverty rates. Because education matters for individuals' life chances, socioeconomic disparity in educational outcomes is a topic of concern to researchers and educators. In sum, family SES during childhood affects education, which in turn affects later SES as well as other life course outcomes.

This entry describes general trends in the relationship between SES and educational outcomes in the United States, then discusses the processes of social stratification in education, highlighting key mechanisms in the family and schools that reproduce social and economic disparities in schooling. It concludes with a brief discussion of current and future research on socioeconomic inequality in education.

## TRENDS IN SOCIOECONOMIC INEQUALITY IN EDUCATION

The Coleman Report (Coleman et al., 1966) remains one of the most influential studies on educational inequality. One of its key findings is that family background has a greater influence on student academic achievement than do school resources; it is the characteristics of students and their families, not those of schools, that account for differences in students' test scores. Sociologists interested in social stratification have examined the ways in which family SES is transmitted.

Peter Blau and Otis Duncan's (1967) *The American Occupational Structure* marked the beginning of the predominance of research on status attainment in sociological studies of social stratification. Using data on adult males in the United States in the early 1960s, those researchers found that a father's education and occupation positively influence his son's educational attainment and occupational status. Although those authors found direct effects on both outcomes, the relationship between family background and a son's occupational status was mediated by the son's educational attainment. This means that although most men end up in occupations that are similar to those of their fathers, education is the main pathway for those from lower-SES backgrounds to move into occupations that place them in higher social strata than their parents. After Blau and Duncan, researchers studying status attainment processes documented the relationship between family SES and educational and occupational attainment.

Although traditional models of status attainment have been successful in documenting and describing the relationship between social origins and individuals' educational and occupational attainment, the Wisconsin model of status attainment developed by William Sewell, Archibald Haller, and Alejandro Portes in1969 takes a more social psychological approach by including cognitive ability, educational aspirations, and the influence of significant others in the process of educational attainment. This model is distinguished from prior status attainment models by its concern with mediating factors and understanding of the way family background affects

the attainment process. Though the Wisconsin study has been replicated and refined by others, the results of later studies generally support the original findings.

Socioeconomic inequality in educational achievement and attainment has persisted over time and across countries and is expected to continue to do so in the future (Gamoran, 2001). More recent studies have confirmed the persistence of the relationship between socioeconomic background and academic achievement over time. In Karl White's (1982) analysis of various studies that examine the relation between SES and academic achievement, a moderate correlation ($r$ = .343) between SES and student academic achievement was found in studies conducted before the 1980s. Selcuk Sirin (2005) conducted a similar analysis of studies done between 1990 and 2000 and found that the average correlation between SES and academic achievement remained moderate ($r$ = 0.299).

This persistent effect of family SES on educational outcomes has larger implications for many other life course outcomes and the reproduction of social and economic inequality. Academic achievement and educational attainment are important determinants of later social and economic success. Educational attainment is positively related to labor force participation, occupational prestige, income, and wealth in adulthood. Not only are SES differences reproduced in terms of later educational, financial, and occupational outcomes, initial SES differences in education can lead to later inequality in adult well-being. Education has been shown to have positive effects on both physical and mental health, and these relationships mediate some of the association between initial SES and health.

Figure 1 shows that the percentage of individuals reporting to be in good or excellent physical health increases with educational attainment. In addition, individuals with higher levels of educational attainment demonstrate more knowledge of current events and higher levels of political participation. Many of these relationships are not due only to differences in social origin; the studies described here have shown that after accounting for differences in family background, the effects of education on later social and economic outcomes still exist.

Having identified the role of education in maintaining the privileged status of those in higher social strata as well as its role in making it possible for those from lower strata to be upwardly mobile, researchers turned to the task of understanding how family SES affects academic achievement and educational attainment. This research has demonstrated that differences in financial resources, parental involvement, social and cultural capital, and school organization and quality all contribute to socioeconomic differences in educational achievement and attainment.

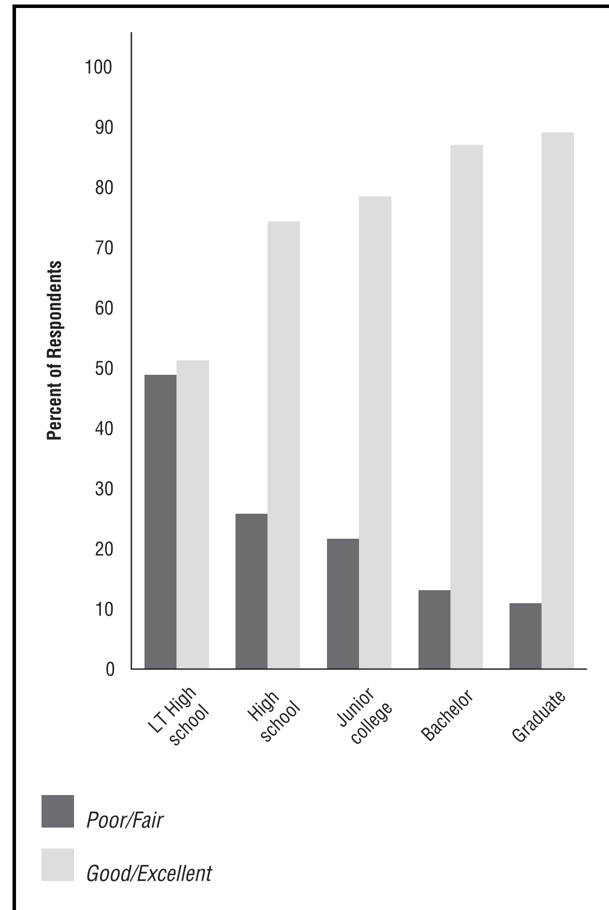


***Figure 1.*** *Self–reported health condition by educational degree attainment, 2006 General Social Survey.* CENGAGE LEARNING, GALE.

## PROCESSES OF SOCIAL STRATIFICATION IN EDUCATION

In the most basic sense, higher-SES parents have resources—human, financial, social, and cultural capital—that translate into advantages for their children in the educational system. One of the most obvious ways in which family SES matters for children's educational outcomes is the tangible resources money can provide. Children from higher-SES families have greater access to resources that enhance academic achievement: books, computers, tutors, trips to libraries and/or museums, and involvement in extracurricular activities. These families also have access to reliable transportation and flexible schedules that make it possible for their children to attend enrichment activities (Lareau, 2003).

**Learning in the Summer Months** Resource advantage also is reflected in opportunities for learning during the summer months, when school is not in session. Research by Barbara Heyns (1978) and Doris Entwisle, Karl Alexander, and Linda Olsen (1997) has attributed much of the disparity in scores on achievement tests between high- and low-SES children to the summer learning gap. Children with disadvantaged socioeconomic backgrounds make smaller increases in achievement during the summer than do their high-SES peers. This, combined with a slower rate of learning during the school year, leads to a widening gap in achievement over time. Some of the differences in summer learning have been attributed to differences in summer activities that are related to cognitive development, such as trips to the library, attendance in summer school, and even summer vacations. Research by David Burkham, Douglas Ready, Valerie Lee, and Laura LoGerfo (2004), however, showed that even controlling for these activities, the summer learning gap between high- and low-SES youth remains. Therefore, future research should focus not only on the frequency of participation in summer activities but also on the nature of activities that can foster higher levels of achievement.

**Parental Involvement and Child Rearing** The availability of those resources also allows higher-SES parents to be more involved in their children's schooling. According to Annette Lareau (1987, 2003), although both middle-class and working-class parents value education and want their children to do well academically, the two groups employ different strategies to help their children in this area. Middle-class parents are more involved in their children's education. They engage in supplemental activities at home, maintain established relationships with teachers and administrators, and are more comfortable intervening on behalf of their children. Working-class parents, in contrast, are more distanced from their children's experiences at school, relying on the schools to educate their children. The interactions they have with school personnel often are marked by a sense of distrust, powerlessness, and ineffectiveness.

Aside from these differences in direct involvement in school activities, there are social class differences in child rearing. Middle-class culture views parenting as requiring a conscious effort to develop children's skills and talents. To that end middle-class parents undertake a process of "concerted cultivation" (Lareau, 2003), emphasizing involvement in extracurricular activities, independence, and developing children's social and intellectual skills through reasoning and discussion. Working-class culture, in contrast, is more focused on what Lareau called the "accomplishment of natural growth." Parents are more concerned with providing children with the necessities—food, clothing, shelter, safety—and believe that children will develop naturally if those needs are met. Working-class parents stress obedience, are less likely to engage in discussion or negotiation with their children, and expect their children to organize their own time.

Because the actions of middle-class parents are valued by schools, middle-class children reap the benefits of their parents' efforts in the form of higher levels of comfort in school and other formal settings and better academic performance. Taken together, the financial, human, and cultural capital that middle-class parents have at their disposal allows them to prepare their children better for academic success throughout their educational careers.

**Social Capital** Children's life chances also are influenced by their access to social capital. James Coleman (1990) defined social capital as resources that accrue to individuals as a result of their relationships with others (their social networks). Coleman (1990) argued that when parents know their children's friends' parents (intergenerational closure), they are in a better position to work in tandem with the other parents to monitor and evaluate their children's behavior because information, norms, and values can be shared through the network. Having parents whose social networks are characterized by higher levels of intergenerational closure leads to better educational outcomes for children. In addition, connections to others provide parents with information and other resources that they can use to improve their children's lives, including their educational experiences. For example, in an in-depth study of social class differences in family life, Lareau (2003) found that middle-class parents have social network connections that provide them with information they can use to help their children navigate the education system. Because social networks are stratified by social class, parents of children in lower strata are less likely to have connections that provide the same kinds of advantages.

**Tracking and School Sector** Although the studies cited above describe processes within the home, the nature and organization of schooling also contribute to socioeconomic differences in educational outcomes. For example, school tracking is considered one of the most important mechanisms in the social reproduction process. Tracking originated in efforts to allow teachers to modify their methods of instruction to suit the abilities of their students. However, Maureen Hallinan (1994) found that track assignment is influenced by a variety of factors other than academic ability, such as resource limitations, organizational constraints, parental influence, and teacher recommendations. Because of these factors, more advantaged families may be better able to manipulate the

***Poverty.*** *Uniontown Elementary School Principal Ora Cummings helps first grade students read at the school in Uniontown, AL. Their desire to learn is not dulled by the fact that recent U.S. Census estimates show that more than one in three of the students in the mostly black Perry County school system, which includes Uniontown, live below the poverty level.* AP IMAGES.

system in their favor, resulting in the overrepresentation of lower-SES students in lower tracks and/or ability groups (Oakes, 1985). This is consequential for socioeconomic inequality in eventual educational attainment because students in college preparatory tracks (also referred to as regular, advanced, or honors course levels) receive more and better academic instruction and have teachers with better skills who present them with more complex material and "high-status" knowledge. In light of the fact that lower tracks provide poorer-quality education, have less qualified teachers with lower expectations, and socialize youth differently, tracking systematically limits the educational opportunities of disadvantaged students.

School sector is another factor in the way SES affects educational outcomes. Public schools are managed by a public entity, generally the state, whereas private schools are not, although they sometimes are affiliated with and/or run by religious organizations. Private schools often require students to go through an extensive application process and charge tuition fees, making them much less accessible to disadvantaged families. Socioeconomic differences in access to private schools are important because attending private school is associated with several positive educational outcomes, including student achievement, retention, and college attendance, although the causal effects of private school attendance have been debated. According to Caroline Persell, Sophia Catsambis, and Peter Cookson (1992), students who attend private schools not only are more likely to attend college but also are more likely to go on to elite private colleges and highly selective public universities. Elite private schools have connections to admissions offices at selective private colleges, making it easier for students to gain admission to those schools. With the increased importance placed on the selectivity of the college/university for one's life chances, the ability to gain admission to selective colleges and universities will be very beneficial for advantaged students and their families, allowing them to maintain their privileged position.

**Access to Resources** The mechanisms through which SES influences education extend beyond an individual and his or her family. As Coleman et al. (1966) demonstrated,

the family backgrounds of a student's schoolmates also influence academic achievement. In a study of high school students in Louisiana, Stephen Caldas and Carl Bankston (1997) found that the social status of schoolmates' families has a significant effect on academic achievement and that this effect is only slightly smaller than that of a student's own family background. Other research suggests that socioeconomic inequality in education also is due to unequal resources at the school level. Because a large proportion of school funding is linked to local property taxes, there is considerable variation in per-pupil expenditures across school districts. Thus, students who live in areas with lower property values often attend schools with less funding. This disparity in funding is reflected in the quality of the schools. Although some research has suggested that school resources and spending do not have as large an effect on student achievement and later income inequality as does family background, other research has shown that unequal spending has led to disparate outcomes in academic achievement. For instance, Dennis Condron and Vincent Roscigno (2003) found that schools with higher per-pupil expenditures are in better physical condition and have a higher degree of classroom order, factors that are associated with higher student attendance rates, higher teacher quality, and higher average test scores.

## CURRENT AND FUTURE RESEARCH ON SOCIOECONOMIC INEQUALITY IN EDUCATION

The studies described above focus primarily on socioeconomic inequality in primary and/or secondary education. However, as more individuals participate in postsecondary schooling, more research has been devoted to socioeconomic inequalities in higher education. Social reproduction theorists such as Pierre Bourdieu and Jean-Claude Passeron (1977) view the continued existence of socioeconomic inequality in education as resulting from the fact that privileged members of society use education to maintain their status and thus pass that privilege on to their children. Thus, as one level of education expands to become accessible to those in the lower strata, the threshold of inequality shifts upward. Most recently, the emphasis has shifted to postsecondary education, and those in the higher social strata have been able to maintain their advantage with higher rates of college attendance and completion. Recent institutional initiatives enacted by several public and private universities (e.g., the University of North Carolina, Brown University, and Stanford University) have attempted to reduce and in some cases eliminate financial barriers to higher education for lower-income and middle-class families. For example, in February 2008 Brown University announced that it would eliminate loans for students whose families earn less than $100,000, and Stanford University approved a plan to waive tuition for students with family incomes under $100,000. Although these initiatives are intended to increase access to education, the effects of these efforts remain to be seen.

College access and enrollment has long been a concern, but research has shifted to studying access to and enrollment in different types of higher education (two-year vs. four-year, private vs. public) and college trajectories. Therefore, it is not only a matter of whether individuals attend college but also how they do so. Postsecondary perceptions and experiences vary by social class. For instance, Robert Bozick and Stephanie DeLuca (2005) found that low-income students are more likely than their higher-SES peers to delay college entry, resulting in a lower likelihood of college completion. Sara Goldrick-Rab (2006) found that college students with lower socioeconomic backgrounds are more likely to experience interrupted pathways through college, which prevent or delay degree completion. Bozick (2007) found that college students with fewer economic resources are more likely to be enrolled only part-time to keep tuition costs down or work to afford college expenses. This can lead to only a partial investment in or disengagement from school, which can lead to dropping out.

In addition to a greater focus on higher education, with the current emphasis on standards and accountability, researchers increasingly have focused on how education policies and reform such as No Child Left Behind (NCLB) alleviate or exacerbate socioeconomic differences in education. Although the explicit goals of reforms such as NCLB are to combat differences in education caused by family background, it remains to be seen whether they have been successful in doing so. Pamela Walters (2001) suggested that although educational reforms have increased educational attainment among disadvantaged groups, they have not closed or reduced social class gaps in education. The same might be true for NCLB. High standards and testing are intended to make school more difficult. This may result in higher rates of dropout, and researchers also are interested in how the effects of accountability and high-stakes testing on academic outcomes such as achievement and school dropout vary by SES.

Another educational reform that is associated with socioeconomic inequality is the school choice movement. Parents, educators, policy makers, and communities are interested in providing alternatives to large public schools. Charter schools allow parents and students to choose schools that better suit their needs. Although charter schools often are geared toward racial/ethnic minority groups or those of lower SES, as with the standards and accountability movement, it is not known whether they really are increasing levels of

academic achievement and if there are social and economic differences in which families choose and attend these schools.

Although most gender differences in educational achievement and attainment have been eliminated and racial/ethnic differences are declining, SES continues to exert a stable moderate to strong influence on educational outcomes. Those from higher social strata are in an advantaged position in terms of financial resources and social and cultural capital and are able to use their resources to pass on that advantage to their children. This relationship between SES and educational outcomes has been shown to occur in a variety of settings, particularly in families, schools, and communities, and is evident at all levels of education (primary, secondary, and postsecondary). Education will also continue to mediate the effect of SES on later life outcomes such as occupation and income, political involvement, and physical and mental health. As Adam Gamoran (2001) noted, family background is likely to continue to influence children's educational achievement and attainment, making it an area of continued interest and importance for researchers, educators, and policy makers.

**SEE ALSO** Volume 1: *Academic Achievement; Cognitive Ability; Coleman, James; College Enrollment; Cultural Capital; Human Capital; Parental Involvement in Education; Policy, Education; Poverty, Childhood and Adolescence; Racial Inequality in Education; School Readiness; School Tracking; Segregation, School; Social Capital;* Volume 2: *Social Class.*

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# SPECIAL EDUCATION

**SEE** Volume 1: *Learning Disability; School Tracking.*

# SPORTS AND ATHLETICS

A primary goal of life course sociology is to document the way in which institutions and interpersonal interactions within those institutions influence peoples' lives. For the study of childhood and adolescence, this focus often leads scholars to highlight the influence of traditional institutions such as the family, education, and religion. Yet research shows that sport is another significant field for understanding development from childhood to adulthood. Although the extent to which it achieves this goal is debated, sport is framed as a domain of activity with the potential to shape a broad range of characteristics and values, such as teamwork, following rules, and discipline, that are central to the development of a prosocial child and future adult.

## SPORT VERSUS INFORMAL PLAY

Although seemingly obvious, clarifying what is meant by the term *sport* is necessary to understanding how it contributes to youth development. This definition often is made by distinguishing sport from what it is not—informal play.

Informal play is a free-flowing activity structured through the mutual agreement of the participants. Norms may exist, but they derive from the interaction of the participants and are open to modification. Sport, on the other hand, is defined as "institutionalized competitive activities that involve rigorous physical exertion" (Coakley, 2001, p. 20). The key distinctions between sport and play are: Sport inherently involves physical activities, sport is based on a goal of competitively establishing a clear winner and loser, and the rules and boundaries of sport are codified in institutions with regulatory powers. Unlike informal play, sport is an institution, meaning it exists without the presence or action of any particular participants. Sports are formalized with written and enforced rules and guidelines. The objective of sports always is predetermined (e.g., to get a basketball through a hoop the most times), minimizing the ability for participants to construct their own goals or outcomes.

For the purpose of understanding the place of sports in youth development, demarcating exactly which activities are sport and which are play is not nearly as important as studying how the interaction with and between participants and adults constructs activities to be more like one or the other. Gary Fine's (1987) study of Little League baseball showed that the balance between sport and play was a source of tension among adults and youth. Coaches and parents stressed the importance of Little League being "fun" and "enjoyable" while concurrently calling for "structure" and "rules" to teach the children important life lessons. Even within the same league, coaches took very different approaches to practice and games. For example, one coach allowed players to play any position they wanted and did not discipline players for playing makeshift games in the dugout. For the youth on this team, baseball would seem very much like informal play. Other coaches, however, held rigorously structured practices that emphasized learning uniform techniques with the ultimate goal of winning each game. Studying the impacts of these two models is a prime area for research in sports participation as it speaks directly to broader issues of learning and human development.

## WHO GETS TO PLAY?

Beyond concerns about what the qualities of sports are and what they should be, there are pragmatic issues concerning how the current system of athletic participation plays out in the lives of youth. The majority of research in this area focuses on organized athletic participation, with primary emphasis on participation in school-sponsored sports teams. One of the unique aspects of studying sports participation, in contrast to involvement in other institutions such as education or the family, is that not all youth are equally likely to be involved. Thus, to understand the impact of being involved in sports, it is necessary to account for the factors that may affect the chances that one will participate in the first place.

A major element influencing the likelihood that a youth will participate in organized sports is one's physical stature. Although very few sports have physiological requirements, most have de facto ideal types, such as being tall in basketball or being petite in female gymnastics. Children may see these ideal types as necessary conditions for participation, and if they do not perceive themselves as fitting the mold, they may be less likely to try out for a team. At more competitive levels, youth who do not match the preferred physical types may be less likely to make the team even if they do try out, either because of stereotypical biases on the part of coaches or because of real physical limitations.

In addition to pure physical structure, cognitive and personality traits may lead certain youth to be more likely to participate in sports or in particular types of sports. For example, children who are more social and extroverted may be drawn more toward participating in sports in general and team sports more specifically than comparatively more introverted or shy children. Similarly, youth who are aggressive may enjoy contact sports such as football or wrestling, and children with high levels of hand–eye motor coordination will find success in sports that reward this ability, such as tennis or baseball. Sociologists of sports, however, recognize that none of these

***Little League Baseball.*** *Little league players celebrate after a victory. There is a debate over whether sports have a positive influence on development or increase propensities toward anti–social and delinquent behaviors.* AP IMAGES.

patterns naturally occur; rather, sports are designed in such a way as to reward certain attributes over others. However, given the reality of the current sporting system, certain inherent physical and cognitive traits will continue to influence young people's likelihood of participation.

Social and structural factors also contribute to the ability of a child or adolescent to be involved in athletics and the likelihood of such involvement as well. One of the most prominent of these factors is a child's family's socioeconomic standing. Youth in families on the lower end of this hierarchy are more likely to live in poorer neighborhoods, which are less likely to have the economic and physical resources to fund organized athletic leagues (Pedersen & Seidman, 2005). Moreover, the move toward private athletic participation, such as club teams, requires families to invest more to keep children involved. From buying equipment and paying for specialized camps to taking time off for trips to tournaments, the cost of playing organized sports has continued to rise, further inhibiting youth with fewer economic resources from participating.

Perhaps one of the most polarizing attributes surrounding sports participation is gender. Title IX, passed in 1972, was intended to provide proportionate opportunities and funding to women in all public institutions. Surprisingly, most of the research and controversy in this area has focused on opportunities for female athletes at the collegiate level, with much less attention paid to equality in secondary education. Although evidence shows that the number of females participating at all levels has increased since the passage of Title IX, their numbers still do not equal their representation of the population in high schools (National Women's Law Center, 2007). Furthermore, high schools, unlike colleges, are not federally required to even report on their achievement of Title IX requirements, creating a lack of accountability and enforcement of the goals of Title IX at this level of participation. Because of this dearth of attention and emphasis, one of the most needed avenues for future research is to examine the way in which Title IX has affected—or not affected—the athletic experience for female children and adolescents.

## SPORT'S IMPACT ON YOUTH

Without question the most researched and contested topic concerning sports and youth is the debate over whether sports have a positive influence on development or increase propensities toward antisocial and delinquent behaviors. Many researchers hold that participation in athletics helps young children learn important life lessons, such as understanding the consequences of decisions, learning from constructive criticism, and accepting failure. More directly, sports are thought to promote prosocial skills and positive affect. Children who play sports learn how to work with others toward a common goal, gain respect for and acceptance of rules and punishments, and develop an increased sense of self-worth. In support of these claims, James McHale et al. (2005) found that sports participants had higher levels of self-esteem and were rated as more sociable by their teachers than nonparticipants.

For adolescents, research tends to focus more on sports' ability to minimize deviant behavior and increase academic performance. Travis Hirschi's (1969) social control theory posits that adolescents who are more attached to norm-enforcing institutions and people are less likely to commit deviant acts than those who are less attached. According to this perspective, sports are posited to limit deviance for several reasons. First, the majority of adolescents who play sports do so for school-sponsored teams, which have requirements for participation. Acting in deviant ways, such as committing crimes, skipping school, or failing in the classroom, would violate these regulations and result in a dismissal from the team, stripping the adolescent of a valued opportunity. Not surprisingly, the majority of research has shown that athletes are less likely to drop out of high school (Mahoney & Cairns, 1997) and, on average, achieve higher grades than nonparticipants (Eccles, Barber, Stone, & Hunt, 2003).

Second, participating in sports requires an extensive time commitment, which reduces the time available to be involved in deviant activities. Third, sports introduce adolescents to positive adult role models and mentors who can directly influence adolescents' choices as well as serve as another psychological control measure (i.e., a valued tie that may be broken by participating in deviant activities). Finally, as for younger children, sports are thought to engender a certain moral framework that disapproves of deviant behaviors.

Despite evidence demonstrating the positive influence of sports, many scholars argue that sports have detrimental consequences for all youth, participants and nonparticipants alike. Three primary areas in which sports are thought to have the most negative impacts are creating and supporting harmful status hierarchies in schools, maintaining and promoting gender inequality, and increasing delinquent behavior and encouraging substance use.

Donna Eder's (1995) ethnographic study of junior high students showed how the limited nature of athletic participation combined with the increased visibility of those who make school-sponsored teams led to status stratification in schools. Students who played sports, especially football for boys and cheerleading for girls, were attributed the highest status in the school, whereas those who were not on teams were socially marginalized. Frequently this stratification increased bullying, both physical and verbal, of the lower-status students, contributing to issues of self-esteem and depression among these students. Eder also contended that school officials were more lenient with the higher-status athletes, which only increased their status and facilitated their negative behaviors.

In addition to producing status hierarchies, sports have been identified as a significant source in the creation and maintenance of traditional gender stratification. Michael Messner (2002) claimed that sports are structured in a way that legitimizes and promotes male dominance. From the time youth begin playing sports, teams are segregated by gender, and even at very young ages children can see a highly unequal distribution of power and resources. Positions of authority in both male and female leagues are virtually all filled by men, and male teams receive disproportionate funding and resources (Eitzen, 2003). Beyond the structural segregation of gender, numerous studies have demonstrated that sports are a site of hegemonic masculine socialization. Often femininity is invoked as a threat and put-down by male coaches. For example, in his observations of a preschool soccer team, Messner found that when the boys were not paying attention the coach would suggest that he would bring "in the Barbies to play them." Similarly, Fine (1987) observed numerous Little League baseball coaches chastise their teams for "playing like a bunch of girls." This type of language teaches children not only that boys and girls are different but also that boys are supposed to be tough and aggressive, that weakness and failure is a feminine quality, and that by and large males are superior to females.

The emphasis placed on stereotypical masculine characteristics in sports also has been linked to increased violence and aggression on the part of participants. Robert Hughes and Jay Coakley (1991) argued that involvement in sports creates *positive deviance*, meaning that athletes' commitment to the values and norms of sports actually increase the likelihood of deviant behavior. For example, participants in particular sports may come to think that violence is an acceptable means to solve problems. Coaches often use contests of aggression as a way to settle within-team disputes, and in certain sports (e.g., hockey), fighting is a tolerated aspect of the game itself. These alternative norms result in socially unacceptable behavior outside of sports. This theory is supported by Derek Kreager's (2007) analysis of a nationally representative sample of adolescents, in which he found that participants in contact sports were more likely to get into physical fights with peers than were nonparticipants, whereas involvement in noncontact sports, such as baseball or tennis, showed no influence on fighting.

The theory of positive deviance helps explain further the seemingly paradoxical finding that students involved in athletics drink alcohol more and use particular drugs more frequently than do nonparticipants (Hoffman, 2006). The idea that one must win at all costs quite clearly encourages athletes' higher use of steroids, and the value of pushing oneself to the extreme could explain collegiate athletes' higher rates of binge drinking. Additionally, unquestioning devotion to the team may lead high school athletes to be more influenced by fellow athletes who drink. Athletics themselves therefore may imbue adolescents with values that make them more inclined to commit deviant acts, as well as providing a social peer environment that supports these behaviors. Still some studies have found no differences between participant and nonparticipant levels of delinquency (e.g., see Miller, Melnick, Barnes, Sabo, & Farrell, 2007, for a review of mixed findings). Thus, despite the numerous studies that have examined this connection, the relationship between athletic participation and deviant behaviors is an area in which further research is needed.

## CONCLUSION

For those interested in education policy, the question concerns the role of sports as an institution given these consequences. Some research points to the mere presence

or inherent nature of sport as problematic, but most scholars conclude that it is the organization of formalized sports programs that leads to negative social consequences. For example, one study found that a program designed to teach Little League baseball coaches positive-reinforcement instruction strategies resulted in an increase in the players' feelings of self-worth over the course of the season (Barnett, Smoll, & Smith, 1992). As noted, the theories underlying arguments both for and against sports participation rest on the idea that youth learn particular values in sports. Thus, life course scholars must continue to study exactly what values and behaviors are being transmitted in the current system of sports as well as designing structures to help promote prosocial characteristics. Although the debate over whether sports are "good" or "bad" seems endless, the question of how sports could be designed in ways to promote gender empowerment, norms of nonviolence, and equality seems to be quite open and worthy of greater study.

**SEE ALSO** Volume 1: *Academic Achievement; Activity Participation, Childhood and Adolescence; Drinking, Adolescent; Drug Use, Adolescent; Health Behaviors, Childhood and Adolescence; Interpretive Theory; Peer Groups and Crowds; Self-Esteem; Social Development; Socialization, Gender.*

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*Kyle C. Longest*

# STAGES OF SCHOOLING

*This entry contains the following:*

I. OVERVIEW AND INTRODUCTION
*Robert Crosnoe*

II. ELEMENTARY SCHOOL
*Carol McDonald Connor*

III. MIDDLE SCHOOL
*Donna Eder*

IV. HIGH SCHOOL
*Abby Larson*
*Richard Arum*

## I. OVERVIEW AND INTRODUCTION

In the United States, education is a system that has a collection of interrelated parts working together to produce some intended outcome—in this case, a well-trained, well-rounded youth who can contribute to the nation's economy and civic institutions. Like most systems, the American educational system originated in a simple form—the one-room, multigrade schoolhouse comes to mind—but slowly diversified into an increasingly complex form, typified by the large, diverse, departmentalized high schools of the modern era. Perhaps the most striking example of this diversification is the gradual reorganization of public education into the three distinct stages of schooling—elementary, middle, and high school—described in the following entries.

These stages emerged through a constellation of sociohistorical forces, including (a) an increasing supply of students because of population growth and the abolition of child labor laws, which meant children were available to attend school during the day; (b) demands introduced by the restructuring of the labor market; and (c) evolving ideas about the developmental needs of children and adolescents. Thus, the challenge of effectively educating increasing numbers of students with widening age ranges in developmentally appropriate ways to supply labor for the industrial (and then post-industrial) economy required that the educational system be divided into more manageable, age-homogenous subsystems.

Elementary schools are typically smaller than middle or high schools. Children move across classes in groups, with nonspecialized classes and few extracurricular activities. This more personalized, generalized approach to education is considered appropriate to the developmental status of young children. High schools emerged to answer concerns about the need to tailor education to adolescents. Larger, with more differentiated curricula and an increase of choice in coursework and activities, these schools are less about fostering learning in a supportive environment and more about preparing students in practical ways to enter adult roles. Middle schools (also referred to as junior high schools) emerged somewhat later as a bridge between these two models of education. Growing too old for the protective, common curriculum of elementary school but not yet socially or psychologically mature for the impersonal, individualized structure of high school, young people in or around the pubertal transition are educated in schools that are supposed to represent a middle ground in size, instruction, and course and activity offerings.

Progress through these stages is cumulative. What is learned in one stage influences what is taught and learned in the next. In this way, achievement trajectories diverge and demographic inequalities compound across stages. This cumulative nature undermines the ability of the system to serve as a vehicle for social mobility for historically disadvantaged groups because children from these groups tend to enter the system with less developed skills and, as a consequence, lose ground over time. In theory, transitions between stages could be turning points, allowing some students to start fresh or change directions. In reality, however, transitions are more likely to be points of disruption that increase performance disparities. Policies to manage transitions and to counteract the cumulative nature of education in general, therefore, are important to making the system work more effectively and better serve society.

**SEE ALSO** Volume 1: *Academic Achievement; High-Stakes Testing; Policy, Education; School Culture; School Tracking; School Transitions; School Violence; Socioeconomic Inequality in Education.*

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***Robert Crosnoe***

## II. ELEMENTARY SCHOOL

Walking into any elementary school in the United States, one sees brightly colored pictures on the walls, frequently the work of students. Stars, writing samples, photographs, and science projects adorn the bulletin boards, and children move quickly and not always quietly through the halls. Classrooms look much they way they did in the mid-20th century, which is not surprising because many schools were built in the 1950s and 1960s to accommodate the large baby boom cohort. In the early 21st century, schools are more diverse ethnically and racially. Unfortunately, children living in poverty still generally attend underresourced schools with less qualified teachers, whereas children from more affluent homes attend schools with computers, libraries, and a stable and well-qualified teaching staff. Nevertheless, the structure of elementary schools is very similar throughout the United States (Stigler & Hiebert, 1999).

### ORGANIZATION OF SCHOOLS

Within a school district, typically headed by a superintendent, each elementary school has a principal and, frequently, an assistant principal. The principal is considered the educational leader of the school and is responsible for all aspects of the students' education, including who their teacher is going to be and which curriculum will be used. The principal is also the lead disciplinarian. Most principals take the achievement of their students very seriously and work hard to make sure every child gets a good education. This level of accountability is mandated in the No Child Left Behind (NCLB) Act of 2001, which holds districts and schools, and thus superintendents and principals, responsible for

students' achievement. This represents an important change in policy away from using school resources as a measure of quality (input) and toward a focus on student learning (outcomes; Cohen, Raudenbush, & Ball, 2003).

For the most part, children attend elementary school from kindergarten through fifth or sixth grade. Although research suggests that a kindergarten through 8th grade model may be associated with stronger student achievement overall, this organization is not as popular. Sometimes children will share classrooms with children one grade level above or below (e.g., a class might be composed of first and second graders), but this is usually a way to stretch resources. Typically students begin kindergarten when they are 6 years old and are required to stay in school until the age of 16 to 18, depending on the specific state's law.

In contrast to middle and secondary (or high) schools, elementary schools are organized to be more protective and nurturing of young children. Generally schools are smaller and children have one teacher throughout the day (although they may change for math or reading). Classes are kept relatively small, and the quality of the teacher–child relationship is an important predictor of students' academic success.

Class size varies from state to state and even from district to district. Most children will attend classes that have between 20 and 30 children. Some states, such as California, Tennessee, and Florida, have mandated class size reductions in the early grades, based on research conducted within the Tennessee school systems. This research shows that in classes of fewer than 17 students, children, especially children living in poverty, generally learned better than did children in larger classes. Most classes include both boys and girls.

A highly qualified teacher is the heart of the U.S. educational system. Indeed, the NCLB Act requires that all students be taught by highly qualified teachers. Unfortunately, deciding what "highly qualified" means is not clear. Qualifications that are typically associated with being a capable teacher do not always predict how well students will learn. For example, years of experience, having a formal teaching credential, and years of education are not consistently associated with students' achievement (Morrison, Bachman, & Connor, 2005). Research does show, however, that when teachers are warm and care about their students, are highly knowledgeable about the subject they teach, and are masterful classroom managers so that children spend most of their day in meaningful activities, children learn more and are happier.

Increasingly, the content of instruction is dictated by state standards. Leading up to the passage of the NCLB Act, states were required to develop rigorous standards for what students were expected to learn at each grade level. These standards vary from state to state. There are no national standards, which is a feature that is fairly unique to the United States among the major countries of the world. Many countries, such as England and Korea, have national standards. Individual state standards (which are available on the World Wide Web) include content for reading, language arts, writing, science, social studies, mathematics, and other subjects. The topics and expectations are frequently provided by grade or by early versus late elementary grades (e.g., kindergarten through second vs. third through fifth). Updating these state standards can be a highly contentious process as stakeholders argue about what should and should not be included. For example, when Florida updated its math and science standards in the winter of 2008, there was controversy as to whether the scientific theory of evolution should be part of the science standards.

A number of states, including California, Texas, and Florida, provide a short list of acceptable curricula in each of the subject areas. Schools and districts may select curricula only from the approved list. In many states, however, the curriculum is a district- and sometimes school-level decision. Increasingly, states, districts, and schools are requiring that the curricula be founded on solid research. Part of the reason for this is that under the NCLB Act, districts, schools, and teachers are held accountable for whether their students learn or not, based on the results of mandated tests and a number of other indicators. By insisting on research-based curriculums, teachers hope to have more effective teaching materials at their fingertips.

Another result of the NCLB Act's focus on student outcomes is more frequent formal assessment of students' reading, math, and science skills. The benefits of this policy are highly contested, but most likely such tests will become a permanent part of the elementary school experience. Fortunately, more effective ways to judge students' learning are being developed. For example, value-added scores recognize that a large part of how students perform on tests is related to the skills with which they entered school (Morrison et al., 2005). If children begin 1st grade with weak reading scores, at the end of the year—even if they make very good progress—they will still not achieve scores that are as high as students who began first grade with very strong reading skills. Value-added scores do not penalize schools where many children begin the year with weak reading and math skills—for example at schools where many students come from families living in poverty. Rather, these scores

***School Resources.*** *Elementary school students gather around school librarian Kathy Leonardis's desk at Lincoln elementary school in Edison, NJ. The library has two classrooms in it and is shared by 4 teachers. Unfortunately, children living in poverty still generally attend under-resourced schools.* © ED MURRAY/STAR LEDGER/CORBIS.

focus on children's progress from the beginning to the end of the school year and take this into account when judging school and district performance.

## HISTORICAL ROOTS OF THE ELEMENTARY SCHOOL MODEL

The roots of the elementary school model that prevails in the United States in the early 21st century can be traced back to the Revolutionary War. Although the colonial settlers founded schools and instituted mandatory education and charity schools, these schools followed European traditions (Jeynes, 2007). With the onset of the Revolutionary War, the founding fathers, and Thomas Jefferson in particular, believed that a new nation deserved a new way of educating their children. Sons no longer attended Oxford and Cambridge but rather went to Harvard, Princeton, or Yale. Many children were schooled at home or in church schools. Prior to the revolution, the education of children was a local endeavor and varied depending on the town and how much the citizens and churches valued education. Most schooling focused on literacy so that children could read the Bible.

With political independence came an increasing focus on the importance of education and the belief that schools improved children intellectually and morally. Private schools flourished. In 1789, the year George Washington became president, Massachusetts passed the Massachusetts Education Act. Towns of 200 or more citizens were required to educate all children (boys and girls) at public expense through elementary school. This act implemented equal education for girls and formed the foundation of American schools. Many of these schools were church-run charity schools, which some credit with establishing many of the characteristics of contemporary U.S. elementary education, including the professionalization of teaching, a focus on developing moral character, and the implicit belief that education can help children escape poverty and become good citizens. These early schools provided the blueprints for the U.S. public education system of the early 21st century.

## CURRENT EDUCATIONAL CHALLENGES

In many respects, the U.S. public school system is a model for providing high-quality free K–12 education

to all children. However, the system can be improved and, indeed, faces significant challenges that have important implications for the future. These include closing the achievement gap, individualizing instruction, and monitoring students' response to interventions so that all children receive an effective education that prepares them for the demands of the modern world.

**Closing the Achievement Gap** Finding ways to close the achievement gap between children who are poor and their more affluent peers is one of the most important goals of the policy and research endeavors of the early 21st century (Jencks & Phillips, 1998). How can instruction be made more effective, especially for the nation's most vulnerable children? Converging evidence is showing that high-quality early intervention, although important (Reynolds, Temple, Robertson, & Mann, 2002), is not an inoculation against academic underachievement. Instead, the impact of instruction across grades appears to be additive and cumulative. This means that students are left further behind in math and reading each year they receive ineffective instruction. It has been argued that closing the achievement gap would do more to promote social justice than any other policy (Morrison et al., 2005). Much of the NCLB Act was designed to do this. States and schools must report achievement test data by ethnic group and poverty levels and must show that all students' performances are improving. Moreover, a move to outcomes rather than resources to hold schools accountable may, in the long run, help close the achievement gap (Cohen et al., 2003). With this in mind, accumulating research on new instructional strategies is presented next: individualized instruction and response to intervention.

**Individualizing Instruction/Response to Intervention** The amount and type of literacy instruction children receive in the classroom consistently and systematically predicts literacy growth. Increasingly, research studies have moved away from the "either/or" days of the reading wars (phonics vs. whole language; Ravitch, 2001). Research shows a combination of methods incorporating code-focused strategies with more holistic and meaning-focused strategies is more effective in supporting students' literacy skill growth (Connor, Morrison, Fishman, Schatschneider, & Underwood, 2007; National Reading Panel, 2000). Code-focused strategies are those that are designed to help children learn that letters and sounds go together and combine to make words. Code-focused skills include the alphabet, phonological awareness, phonics, and letter and word fluency. Meaning-focused strategies are designed to teach children how to extract and construct meaning from text. Activities include reading aloud together, discussion, comprehension strategies, and writing. Generally, as long as interventions are sustained, intensive, and balanced with at least some time spent in explicit code-focused instruction (especially for children with weaker skills), educational differences across interventions that differ in pedagogical theory are small.

New research is finding that instruction that is tailored to the individual needs of children is more effective than high-quality instruction that is not individualized (Connor et al., 2007). Using software that computed recommended amounts of code- and meaning-focused instruction for first graders based on their vocabulary and reading test scores, many teachers were able to individualize reading instruction. The software recommended substantial amounts of time in teacher-managed code-focused instruction (e.g., phonics) for children who were struggling with reading. For children who were strong readers, however, the software recommended more time in independent meaning-focused instruction (e.g., reading books, writing). The more precisely the teachers provided the recommended amounts of each type of instruction, the stronger was their students' reading skill growth. Further, when teachers fully individualized instruction, they were able to close the achievement gap between children with strong and weak vocabulary skills (Connor et al., 2007). This finding was encouraging because children living in poverty often start school with weaker vocabulary skills compared to their more affluent peers.

Another way to individualize instruction for those children who are truly struggling to learn to read is *response to intervention*. There is a vital need for effective early identification and interventions for students who struggle to learn reading and mathematics. Remediating these problems becomes increasingly difficult over time. Once students fall behind, even the most powerful remedial interventions are often unable to help them (Torgesen, 2005). On average, children who have weak reading skills at the end of second grade almost never acquire average reading skills by the end of elementary school.

## THE ROLE ELEMENTARY SCHOOLS PLAY IN THE LIVES OF STUDENTS AND IN SOCIETY AS A WHOLE

School and classroom environments are among the strongest influences on children's early life experiences. Thus, children who attend good schools have a lifelong advantage over children who attend underresourced and ineffective schools. Effective schools share common characteristics (Taylor & Pearson, 2002; Wharton-McDonald, Pressley, & Hampston, 1998), including a safe and orderly environment, strong leadership, high expectations for student achievement, an emphasis on academics, uninterrupted

time devoted to literacy and mathematics instruction, the use of assessment to evaluate student progress and guide instruction, and good classroom management.

The climate of the classroom and the social and emotional support provided by effective teachers is important. Children generally learn better and develop important social skills in classrooms that provide high levels of social and emotional support as well as instructional support. These learning environments appear to be especially important for children who have weaker social skills in kindergarten. Students' interest in learning, or *engagement*, and their motivation to learn also contribute to their success in school. Thus the more teachers understand about how to engage and motivate their students to learn while spending time in meaningful instruction activities that take into account children's skills, the more effective classrooms and schools will be.

Effective schools are important for students because early success builds a foundation for a lifetime of achievement. Children who achieve well in school become contributing members of society (Shonkoff & Phillips, 2000; Snow, Burns, & Griffin, 1998). At the same time, school failure is costly for students and society alike. For example, children who cannot read well are more likely to be retained a grade, to enter special education, and to drop out of school, and ultimately are more likely to enter prison and be unemployed. Elementary schools serve a crucial role in American democracy.

**SEE ALSO** Volume 1: *Child Care and Early Education; Learning Disability; School Transitions.*

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***Carol McDonald Connor***

## III. MIDDLE SCHOOL

Middle schools play an important role in American society. Because early adolescence is a time of rapid cognitive, emotional, and social change, middle schools need to be places that promote this growth while fostering a sense of belonging. Contemporary research offers a clear understanding of the importance of teacher caring and a sense of belonging for students' academic and social well-being, especially at the middle school level. Yet many middle schools are currently not organized to promote belonging and a sense of community.

### THE HISTORY AND ORGANIZATION OF MIDDLE SCHOOLS

Initially, the middle school concept was developed to deal with the multiple changes and wide range of maturing students undergo between the sixth and eighth

grades. Middle schools replaced junior high schools that typically covered seventh through ninth grades, as well as the kindergarten through eighth grade model. Educators emphasized project-based learning within teams of 2 to 5 teachers. The advantage of project-based learning for this age group is that students can work on different aspects of the same project, reflecting their different levels of development. The initial concept also emphasized learning communities where students gained a sense of belonging by participating in decisions about topics of study and the social operation of the classroom.

The ways in which most middle schools are organized does not correspond with this initial concept. Rather than team-based instruction, most schools are organized with students taking courses from different teachers. According to Anthony Jackson and Gayle Davis, authors of *Turning Points 2000: Educating Adolescents in the 21st Century* (2000), the most common form of curriculum organization is tracking, which assigns students to different classes based on their actual or perceived capacity to learn. In this way middle schools—like the junior high schools that preceded them—are really "mini" high schools, lacking an organization that meets the special needs of this age group.

Educators continue to seek organizational changes in line with the initial middle school concept. When they describe aspects of effective schools, they continue to emphasize the importance of small learning units, team teaching, and other aspects that contribute to a sense of community and belonging. Jackson and Davis cite evidence from numerous studies showing that small schools lead to better educational outcomes and advocate dividing students in large schools into "houses." While they recommend houses numbering no larger than 250 students, there is evidence of especially positive student outcomes with houses of 120 students or fewer. The houses should be diverse—reflecting the ability levels, ethnicities, and social classes of the school population—given the problems that have been identified with dividing students on the basis of perceived or actual ability.

Entwined with the concept of houses is the concept of team teaching, which groups teachers covering the core subjects of math, science, social studies, and language arts. Ideally, these teams of teachers would stay together for a minimum of 5 years. Still other organizational aspects of effective schools include keeping students with the same team of teachers for more than one grade and using differentiated curriculum, which varies both by content and process according to different levels of readiness, interest, and learning styles.

## THE ROLE OF MIDDLE SCHOOL AND SENSE OF BELONGING

Middle schools have social value as well as academic value for early adolescents. Schools are most successful when students see their schools as communities and experience a sense of belonging. This may happen naturally in rural areas where middle schools are often the focus of community life. It also occurs in affluent suburban areas that have the resources to create exemplary schools with low teacher-student ratios. In other cases, administrators and teachers have adopted the model of smaller houses with project-based learning to create definable learning communities.

Research on middle schools has focused on students' sense of belonging, drawing upon the theories of John Dewey (1859–1952) and Lev Vygotsky (1896–1934). Both theorists view education as a social process that is most successful when students are part of meaningful groups. There is now considerable evidence that teacher support, peer support, and a sense of belonging are important for students academically.

Students who perceive that their teachers support them have higher expectations for academic success, value education more, and often have higher academic motivation than do other students. Furthermore, when teachers were perceived as supportive, as promoting interaction with peers, and as promoting mutual respect among students, students showed an increase in motivation and engagement. However, when teachers were perceived as promoting academic comparisons and competition with other students, students experienced a decrease in motivation and engagement.

Other studies reveal the ways in which teacher caring influences students' social and emotional welfare. One study found that teacher caring was linked to students' goals for altruistic behavior and social responsibility. In another study, the school was shown to have more impact on students' emotional distress and acts of violence than the family at the middle school level (Resnick et al., 1997). In her review of research on a sense of school belonging, Karen Osterman (2000) notes that while an experience of belonging is important at all age levels, it is especially important during middle school.

Given the importance of teacher and peer support at this age level, some studies have examined the degree to which different students feel supported by their teachers and peers. While a sense of belonging led to positive outcomes for all students, African-American and Hispanic students in low-income schools have much less sense of belonging in school than do White students in middle-income schools (Goodenow & Grady, 1993). Even though peer support is often important for a male student's academic well-being, males in one study had more negative relationships with classmates (Wentzel & Caldwell, 1997). Osterman (2000) reports that secondary schools, on average, are less supportive than elementary schools. She indicates that tracking adds to this

trend, with students in lower tracks expressing much lower levels of perceived teacher caring and support.

## PEER CULTURES WITHIN MIDDLE SCHOOL

Although not studied as extensively as school belonging, another theme in the research on middle schools is the study of peer culture. In their 1995 book, *School Talk: Gender and Adolescent Peer Culture*, Donna Eder, Catherine Evans, and Stephen Parker found that students in the middle school they studied defined popularity as being well-known by other students and not necessarily as being well-liked. Because of the limited number of extracurricular activities, cheerleading and certain male sports became very important for gaining visibility in this school. The large size of this school (more than 750 students), combined with the limited opportunities for visibility, meant that many students reported feeling like social failures. While high schools also provide students with some visibility through extracurricular activities, the fact that high schools offer a much wider range of activities means many more students find ways to become socially connected with their peers than do middle school students.

Other research suggests that high-status groups, such as preps, achieve prestige because they reproduce mainstream values. In their study of cheerleading and school board policy, Pamela Bettis and Natalie Adams (2003) found that a school's policy to reduce race and social class bias in the composition of its cheerleading squads failed to be effective 5 years after being implemented. They found that cheerleaders tend to be selected on the basis of their petite appearance and ability to mask feelings with a smile, characteristics that were more common in the middle-class and White student culture.

Eder and her colleagues (1995) also found that the social isolates in the school they studied were frequent victims of bullying. Because students often take out their social anxieties on the most vulnerable students in the school, those who lacked a friendship group were targets of most of the bullying. While these students were initially isolated, in part, because of their appearance, lower intelligence, or atypical gender behavior, it was even more difficult for them to enter a peer group once they became the target of bullying.

Much of the research on peer culture focusing on peer harassment indicates that bullying occurs most often between the sixth and eighth grades. While there is little variance across urban or rural settings, the targets of harassment vary depending on the racial composition of the school. Sandra Graham (2004) found that the majority ethnic groups were perceived to be the aggressors (in this case, blacks and Hispanics), whereas the minority ethnic groups were perceived to be the victims (in this case, other racial groups as well as Whites). As in her other research, the bullies in this study had high social standing, while the victims reported more loneliness and more social anxiety than non-victims. Interestingly, when classrooms were ethnically balanced, students felt less lonely and less socially anxious.

The research on peer status and peer harassment cannot be explored fully here, but it is important to consider aspects of the middle school environment that could contribute to an emphasis on social rankings and bullying, such as the limited number of extracurricular opportunities leading to visibility for a few students in many schools. Also, when adults rank and label students through tracking assignments, they could be inadvertently promoting the ranking and labeling of students by each other. These larger organizational aspects can have a strong impact on peer culture as well as classroom factors such as those mentioned above.

## DIRECTIONS FOR FUTURE RESEARCH

Middle school researchers know more about social psychological processes, such as the influence of a sense of belonging, than the influence of peer and teacher cultures on middle school students. Studies, such as the one on cheerleading policy, are a reminder that unless policy decisions take students' culture into account, they will meet with limited success (Bettis & Adams, 2003). Had the policy makers paid attention to the way cheerleading selection was shaped by middle-class and White peer culture, they might have crafted a more effective policy for limiting biases in selection. Currently most studies of peer culture are at the high school and elementary level, so that little is known about how peer cultures vary depending on the backgrounds of students and the organization of the school.

There is even less research on teacher culture at the middle school level. Some researchers have suggested that teachers may react to negative elements in peer culture by assuming that adolescents are naturally unkind. More research is needed to better understand the nature of teacher culture in diverse school settings.

Also needed is a better understanding of the impact of organizational changes beyond the classroom. Studies of the process and outcomes of school changes, such as James Rourke's *Breaking Ranks in the Middle* (2006), will benefit the understanding of these broader influences. In particular more research is needed comparing the influence of organizing students in diverse houses as compared to homogenous tracks, as well as comparing schools with intramural activities to those with extracurricular activities in terms of their influence on peer rankings and

bullying. It is likely that by providing more students with opportunities for visibility and participation through intramural activities, students might focus less on peer status and isolates might have an easier time joining peer groups.

The impact of middle school teacher training is another subject deserving of attention. Currently most states do not require specialized preparation at this level, using instead the elementary versus secondary model. This may explain, in part, why many middle schools are structured like high schools, as most middle school teachers are trained along with high school teachers, with many using middle schools as their starting point on the career ladder.

Given the needs identified with this age group, middle school training might best employ what has been called a suppositional, as opposed to a propositional, approach to teaching. In this approach teachers are encouraged to invite student input as part of exploring a topic that might go in many directions. Teacher training should also include knowledge about organizational and cultural influences on students' experiences along with cognitive and psychological ones. By comparing teachers with specialized middle school training versus those with secondary training, one can better assess the impact of specialized training on teachers' and students' experiences.

In summary, middle schools were designed to address the special needs of and wide range of maturity in students between sixth and eighth grade. Unfortunately, many schools in the early 21st century are organized more like high schools, with the common use of curriculum tracking and the focus on extramural versus intramural activities. This may be due, in part, to the lack of specialized training for the middle school level. It may also be due to a lack of awareness of the cultural and organizational influences within middle schools. Until there is a better understanding of all the organizational and cultural factors at play, schools are not likely to foster the sense of belonging that research shows is so important at this period in the life course.

**SEE ALSO** Volume 1: *Academic Achievement; Bullying and Peer Victimization; Human Capital; Peer Groups and Crowds; Policy, Education; School Tracking; School Transitions; Segregation, School.*

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***Donna Eder***

## IV. HIGH SCHOOL

In the United States, high school is undoubtedly one of the most important institutions in an individual's life course. The high school plays two primary roles in the lives of students and society, the importance of which cannot be overestimated. The first role of the high school is that of sorting and selecting students for differentiated life tracks and opportunities. The second role is that of socializing students to community norms, roles, and behaviors. The ways in which students experience these processes holds profound implications for college-going, access to middle-class jobs, and quality of life more generally.

### HISTORY AND ORGANIZATIONAL STRUCTURE

The American high school has its roots in the nation's earliest years. The high school developed in response to economic stimulus and cultural inspiration. An increasingly diversified, industrial economy, coupled with urbanization and modernization, created the need for specialized and advanced forms of training. At the same time, early educational reformers—responsible for putting a system in place that largely remains in the 21st century—found their philosophical footing in four

cultural currents. As much as economic demand, the American high school was born from the social needs of early citizens, with the public (common) school system fueled by four primary cultural facts: the democratization of politics; the struggle to maintain social equality; changes in conceptions of the individual and society; and the rise of nationalism (Cremin, 1951). Educational founders and reformers, working from within government bureaucracies, felt confident that a public, specialized school system would meet demand for labor, guard against the creation of a caste system, and prepare youth for civic participation. Universal schooling would also Americanize increasing numbers of immigrants arriving in the 1830s and 1840s on matters pertaining to the primary roles and values of the new nation.

Early reformers such as Horace Mann (1796–1859) agreed that education should be free and available to all and that a curriculum should include essentials for everyday living, including reading, writing, spelling, and arithmetic, as well as instruction on moral adequacy and responsible citizenship. Free public education was first put into legislation following a report to the Philadelphia legislature in 1829, which stated that "all children, regardless of means, should have access to a liberal and scientific education." The same bill called for the establishment of high schools, based on a union of agricultural and mechanical instruction with literary and scientific instruction (Cremin, 1951).

Early high schools followed the village model, and were largely structured and run by local authorities. As cities and towns grew, and with increasing migration to urban centers in the mid- 19th century, high schools underwent important structural and governance changes. Tension emerged between a model of local governance and bureaucratic control. A struggle between community control and professionalism was waged openly until later in the century when two important trends took the country by force. As the industrial revolution advanced, the distinction between work and home, and the character of interactions, changed appreciably. Simultaneously, with the expansion of science, individuals relied less on folk knowledge and public schools lifted up rationalism and science-based expertise. These trends favored professionalism and the systematizing of U.S. high schools, both in terms of curricular decisions and with its embrace of corporate, centralized governance. Schools developed different tracks and specializations, and high schools began to occupy an increasingly important position in the life course, as knowledge gained ground on culture and social pedigree. This period of time came to be known as the Progressive Era (1890–1920), which was associated with efficiency, expertise, and the public service of disinterested elites. It was also an era that resonates strongly with contemporary educational reforms.

In the 20th century, high schools experienced massive expansion and growth and went through various structural reforms. In general, high schools became larger and more complex, and more sophisticated and ambitious in their goals with increased course offerings and specializations. This offered, in some part, changing notions of intelligence, and the emergence of psychometrics. Furthermore, with time, schools played an increasingly important role in students' lives, due in part to the passage of child labor laws, in addition to increasing demands from employers for certified credentials—a holdover from the Progressive Era. As schools began to matter more, the system of sorting and selection, as well as principal teaching philosophies developed dramatically. The latter part of the 20th century through the present day is defined most notably by its increasing expansion, adoption of desegregation laws in the 1960s and 1970s, and a decline in vocational training in favor of liberal education in the service of the emerging national standard of college for all.

## STRATIFICATION AND SOCIALIZATION FUNCTIONS

Since its foundation, the high school has been a selective institution. During its earliest years only selected populations (primarily White males) were considered to be candidates, despite its availability "to all" per law. When high school attendance became compulsory in the 20th century, sorting and selection processes occurred within the schools. In spite of early Americans' resistance to a caste system of economic and social stratification, the United States has developed a distinct class system where some individuals occupy privileged positions and others remain at the bottom of the class ladder. Contrary to the position of social Darwinists, social hierarchies do not happen naturally but rather are built and maintained by a series of social institutions.

Writing in the mid-20th century, Harvard sociologist Pitirim Sorokin (1889–1968) summarized, "Within a stratified society, there seems to exist not only channels of vertical circulation, but also a kind of a 'sieve' within these channels which sifts the individuals and places them within society" (Sorokin, 1959 [1927], p. 182). Taking his cues from Max Weber's (1864–1920) classic writings on the interchange between modern democracy, bureaucracy, and education, Sorokin equates this "sieve" with social institutions such as the church, the army, the family, professional organizations, and, importantly, the school. In scholarship that examines the sorting functions of education, there is a tension among scholars about whether schools serve to advance social mobility or reinforce existing social hierarchies. This debate is discussed below.

***High School Fashion Show.*** *High School students standing in a hallway wait to participate in a fashion show. High School socializes students to community norms, roles, and behaviors.* © ARISTIDE ECONOMOPOULOS/STAR LEDGER/CORBIS.

In addition to its sorting and selecting role, the high school is one of the most important socializing institutions in the individual life course. Writing in the latter part of the 19th century, Émile Durkheim (1858–1917) was among the first to acknowledge this role: "The aim of education, is, precisely, the socialization of the human being; the process of education, therefore, gives us in a nutshell the historical fashion in which the social being is constituted" (Durkheim, 1982 [1895], p. 6). Schools are not merely places where students sit, isolated from each other, in dialogue with words on a page. On the contrary, schools are complex social sites where students interact with teachers, and, not insignificantly, with their peers, during a very formative developmental period. To dismiss the social elements of the high school experience is to come away with an incomplete understanding of its role in the lives of students and society.

Adding significantly to knowledge on schools as sites of social activity, where certain behaviors are learned, rewarded, and sanctioned, was sociologist James Coleman (1926–1995). Writing first in 1961, Coleman published *The Adolescent Society*, which documented the importance of peer relationships for student learning. Later in the decade, Coleman led a research team to assess the impact of desegregation in schools. The subsequent report, *Equality of Educational Opportunity* (1966), commonly known as *The Coleman Report*, focused again on peer effects. The Coleman Report stirred up the world of educational research with an examination of desegregation. Most notable of his findings was the assertion that White schools were outperforming Black schools, even with equal funding. For Coleman, the difference in student achievement between and within high schools was influenced by students' communities, particularly by the cultural and social capital of parents and caregivers, and the degree to which parents and communities maintained meaningful contact and intergenerational social closure—a concept Coleman defined as social capital.

Another high profile finding in his study was that Black students benefited from being in integrated schools. Coleman's work led to the introduction of school busing policies, which were intended to diminish the lingering impact of school segregation, rooted in

residential segregation. Following a decade of research on White flight and busing in the 1970s, during which Coleman retracted his commitment to busing policies, he launched yet another major strand of inquiry that compared student achievement in Catholic, private, and public high schools. Holding economic and racial status constant, Coleman concluded that students in Catholic high schools outperformed their peers in public schools. He attributed the advantages to greater parent engagement, better school discipline, and a strong sense of school community.

The importance of the high school as a socializing institution is being increasingly taken up by social scientists that have grown increasingly concerned with violence and disorder in schools, as well as with increasing incarceration rates of young adults that the public has associated with school inadequacies (e.g., 73% of adults believing that poor quality of schools is a critical or very important feature of increasing crime [Gallup, 1994, p. 184–185]). In particular, sociologists of education have argued that public school capacity to socialize youths requires the moral authority of school actors, which has been undermined both by adversarial legal challenges to school disciplinary practices as well as by policies that have limited educator's professional discretion by requiring mandatory zero-tolerance punishments (Arum, 2003).

## RESEARCH DIRECTIONS

Within research on the U.S. high school, there is broad consensus about its importance in the life course. Students' high school experiences and performance have profound implications for quality of life and opportunity. Apart from this general agreement, however, researchers tend to fall into two different camps about how high schools impact student life chances. One group tends to view high schools as truly democratic places where students gain access to social mobility, and where special examinations allow for talented, hardworking students to rise to the top, regardless of social background. This is not to say that schools produce equality; on the contrary, according to Sorokin, "even in the most democratic school, open to everybody, if it performs the task properly, is a machinery of 'aristocratization' and stratification of society, not of 'leveling' and 'democratization'(Sorokin, 1959 [1927], pp. 189–190.). However, while the winners in this system constitute a new privileged stratum, schools themselves do not hinder social mobility (Weber, 1946). Other researchers, however, have shown that rather than promote social mobility, high schools themselves actually work to maintain and reinforce social hierarchy. Exemplary of research in this trend is Adam Gamoran's 1992 study, *Is Ability Grouping Equitable?*, where he demonstrates that the common high school practice of ability grouping reinforces divisions that contribute to inequality through the separation of students from different racial, ethnic, and social backgrounds.

In line with Coleman's examination of school environment and peer effects, contemporary research on high schools is largely focused on the relationship between schools and communities. Unlike previous work, however, current research takes a closer look at what is meant by a school community. At present and going forward, researchers are working to identify and define the political, institutional, and network dimensions of school-community relationships. In particular, scholarship on schools is emerging in the neo-institutional tradition. Leaders in this field argue that schools are embedded not only in local communities, but are also situated in larger organizational communities, or what neo-institutional scholars refer to as *organizational fields*. Organizational fields include organizations directly related to schools, such as regulating bodies, union organizations, and professional schools, or that share similar structural attributes, such as other schools in the same school district. Researchers are currently working to demonstrate how these organizational relationships affect school institutional practices and subsequently are thus implicated in the shaping of life course trajectories of individuals. The field of institutions and individuals subject to such studies is vast: 3,303,000 U.S. high school students are on track to graduate in the 2007–2008 school year, 2,988,000 from public schools and 315,000 from private schools. These numbers are consistent with steady growth over time in percentages of the adult population completing high school. The percentage of the American adult population (ages 25 years and over) who have completed high school (including both diplomas and high-school equivalency exams) climbed from 82% to 86% from 1998 to 2008.

**SEE ALSO** Volume 1: *Academic Achievement; Coleman, James; High School Organization; Human Capital; Policy, Education; School Transitions; Segregation, School; Social Capital; Socialization.*

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## STEPFAMILIES

SEE Volume 1: *Family and Household Structure, Childhood and Adolescence;* Volume 2: *Remarriage.*

## STRESS IN CHILDHOOD AND ADOLESCENCE

SEE Volume 1: *Mental Health, Childhood and Adolescence; Resilience, Childhood and Adolescence;* Volume 2: *Risk.*

## SUICIDE, ADOLESCENCE

### DEFINING SUICIDE AND SUICIDALITY

Suicide refers to causing one's own death. This act may be pro-active or "positive," when one actively takes one's own life, or "negative," when one does not take actions to save one's own life when in danger. Distinctions are also made between direct and indirect suicide. *Direct suicide* refers to actions that one knows will almost certainly lead to death, while *indirect* refers to actions that one may knowingly take that could potentially lead to death, such as in entering a very risky situation like using potentially lethal drugs.

Scholars of suicide emphasize that suicidal behavior involves a continuum. At one end is *suicidal ideation,* which is talking or thinking about ending one's life. The next point on the continuum is developing a plan for how one would do this, followed by an attempt to kill oneself, generally referred to as a "suicide attempt." The final point of the continuum is an actual completed suicide. The term *suicidality* is sometimes used to refer to the entire continuum and also is used to describe attitudes and behaviors that may indicate that a person is at risk of committing suicide.

When the general public and scholars discuss teen suicide, they generally refer to the teenage years, from 13 to 19. However, because government data are almost always reported in 5-year age ranges, statistical reports of teen suicide usually involve the age range of 15 to 19 and, occasionally, 10 to 14 years of age.

### VARIATIONS IN TEEN SUICIDE

Teens are not at equal risk of suicide. Studies throughout the years have noted differences by developmental status or age; by demographic characteristics, especially race and gender; and over historical time periods. Rates also vary between countries. International variations in suicide rates of teens generally mirror cross-cultural variations in suicide rates of adults.

**Developmental Trends** Suicide rates are higher for older teens than for younger teens. For instance, in 2005 suicide rates for youth age 15 to 19 in the United States were 12.1 per 100,000 for males and 3.0 per 100,000 for females. For 10- to 14-year-olds, the rates were 1.9 for males and 0.7 for females (Sourcebook of Criminal Justice Statistics Online, 2007). Changes that accompany adolescence, often involving concerns with body changes, emotions, and evolving sexuality, are associated with these developmental differences in suicide rates. Studies also indicate that factors related to the risk of suicide may vary developmentally, with some risk factors having a more powerful influence on suicide attempts in the younger teen years than the older teen years.

**Demographic Variations** Demographic variables are strongly related to completed suicides and suicide attempts. As noted above, completed suicides are much

higher for males than for females. This pattern appears at all age ranges and cross-culturally. In contrast, non-fatal suicide attempts are more common among females than among males. Data from the Centers for Disease Control, for a representative sample of students in grades nine through twelve in 2005, indicate that 10.8% of females and 6.0% of males reported one or more attempts of suicide in the year preceding the survey (CDC, 2006).

Pronounced differences exist between race/ethnic groups in suicide deaths and attempts. Suicide rates are higher for Whites than for Blacks at all age groups and for both sex groups. For instance, for 15- to 19-year-olds, the rates for Whites are usually about twice as high as those for Blacks (13.2 per 100,000 versus 7.2 for males, 3.1 versus 1.4 for females in 2005) (Sourcebook, 2007). Given smaller population sizes, the data for other race and ethnic groups are somewhat less reliable. Consistently, however, American Indian/Alaskan Native young people have rates that are much higher than those of other race or ethnic groups. In addition, data from surveys of adolescents indicate that gay, lesbian, and bisexual teens and young adults have higher rates of both suicide ideation and suicide attempts than heterosexual teens (Silenzo, Pena, Duberstein, Cerel & Knox, 2007).

**Historical Trends** Suicide rates have fluctuated over historical time for people in all age groups. Within the United States, rates are often higher during times of economic distress, such as the era of the Great Depression in the 1930s. Changes in rates of suicide for teens have often paralleled the changes for the total population. For instance, the suicide rate for 55- to 59-year-olds in 1930 was 38.2 per 100,000, but by 1960 was substantially lower at 23.6. The rates for teens also declined, although not as dramatically: from 4.4 per 100,000 in 1930 to 3.6 per 100,000 in 1960. Life course scholars and demographers refer to changing patterns over time as a "history" or "period" effect.

For many years the suicide rates for adults were substantially higher than the rates for teens, reaching their highest levels at older ages, usually among men ages 65 and older. Life course scholars use the term *age effects* to describe these differences between age groups. The dramatic differences between the ages in the risk of suicide was noted by the earliest observers of suicide rates, the "moral statisticians" of 19th-century Europe, and were long thought to be immutable.

This traditional pattern of age effects changed quite dramatically, however, in recent decades. For instance, in 1930, suicide rates for adults in their late 50s were more than eight times as high as those for teens 15 to 19. By 1960 the ratio had declined slightly, to 6.6. But by 1995, adults in this age group had suicide rates that were only 1.2 times as high as teens. This resulted from both a substantial decline over time in the rates of adults (to 12.9/100,000 for 55- to 59-year-olds in 1995) and a very sharp rise in the rates of teens (to 10.5/100,000 for 15- to 19-year-olds in that year). These changing ratios between youth and adult suicide have persisted through the start of the new millennium. Some scholars suggest that these changes reflect birth cohort effects, patterns of suicide that differ between groups of people born in different eras. They suggest that more recent birth cohorts are much more prone to suicide at younger ages than were earlier cohorts (Stockard & O'Brien, 2002a, 2002b).

## THEORETICAL EXPLANATIONS OF TEEN SUICIDE

Explanations of teen suicide are found in both psychological and sociological literature.

**Psychological Explanations** An important influence on all psychological explanations of suicide, both teen and adult, has been the work of Sigmund Freud, who wrote from the late 19th century through the 1930s. Many of these writings focused on aggressive urges and motivations, but, during his lifetime, Freud's views on the sources of aggression and suicide changed. In his earlier writings Freud suggested that suicide involved aggression turned inward, toward one's self, an action that is more likely to happen when an individual is anxious and fears punishment by others (Freud, 1957/1917). In his later years Freud rejected this formulation and suggested that aggression, including that against oneself, reflected a "death instinct" rather than simply a reaction against frustration (Freud, 1955/1920). One of the most notable scholars to follow in Freud's footsteps was Karl Menninger, also a psychoanalyst. Menninger suggested that every act of suicide includes three elements: hate, or the wish to kill; guilt, or the wish to be killed; and hopelessness, or the wish to die. Like Freud, he concluded that suicide is "disguised murder," motivated by an unconscious wish to kill another (Menninger 1938, p. 55).

Other scholars, especially those influenced by empirical psychology and tenets of learning theory, built upon Freud's earlier analyses, dismissing the notion of a "death instinct." The most influential work in this tradition is the frustration-aggression hypothesis developed by John Dollard and his colleagues in the late 1930s. They originally contended that "aggression is always a consequence of frustration" (Dollard, Miller, Doob, Mowrer et al. 1939, p. 27), but later modified the hypothesis to state that aggression can be one of a number of responses to frustration (Miller, Sears, Mowrer, Doob et al, 1941).

Following the early Freudian tradition, they suggested that the usual target of one's aggression would be the perceived source of the frustration, but that at times the aggression could be displaced onto others, including oneself. Thus, like previous scholars, they generally saw suicide as displaced homicide, but also suggested that suicide could occur when the self was seen as the source of frustration. Their analysis strongly influenced the work of later clinicians, as well as several sociologists.

Common to the work of all of the scholars working within this broadly defined Freudian heritage is a concern with the strength of the superego or conscience. A strong superego can impel individuals to check and control aggressive intentions toward others. At the same time, an excessively strong superego may prompt individuals to turn aggressive actions against the self. While few contemporary social scientists use an explicitly Freudian, or even neo-Freudian, approach, many are concerned with the circumstances related to the development of the conscience and self-control. In addition, some sociological work on lethal violence that appeared in the mid-20th century often built, at least implicitly, upon the neo-Freudian assumption that suicide (and homicide) are related to frustration, but translated this understanding into a macrolevel analysis of rates (Whitt, 1994).

**Sociological Writings** Psychological explanations of suicide focus on characteristics of individuals and, at times, their relations with others, generally trying to understand why one individual rather than another might choose to end his or her life. In contrast, sociological explanations focus on characteristics of societies and sub-populations of societies and the reason that some groups have higher rates of suicide than others.

The most important contributor to sociological analyses of suicide was Emile Durkheim, a French scholar writing in the late 19th and early 20th centuries and now considered one of the founders of the discipline. His book *Le Suicide*, published in 1897, has long been considered a classic contribution. Durkheim delineated four different types of self-destructive behavior, and contended that each type of suicide was related, in different ways, to varying amounts of social regulation and integration. He gave relatively little attention to two of these categories, altruistic and fatalistic suicides, which he suggested reflected reactions to very high levels of integration and regulation. Altruistic suicide may involve killing one's self for the good of society, whereas fatalistic suicide occurs when one sees no hope in the future, such as in the case of slaves who are confined by societal rules. The bulk of his writings and statistical analyses, as well as those of later generations of sociologists, concentrated on the impact of too little social integration and regulation and increases in what Durkheim termed egoistic and anomic suicide.

Despite Durkheim's lengthy attempts to distinguish these two varieties of suicide, sociologists have long noted that his distinctions are both conceptually confusing and inconsistent. Most contemporary discussions tend to blur the distinction and focus on the two underlying causal variables posited by Durkheim, generally suggesting that they are strongly related. *Social integration* refers to the ties of individuals to the society, and the strength of one's relationships with others. *Social regulation* refers to social control that a group holds over its members. The basic hypothesis stemming from this work is that suicide rates will be higher among populations that have weaker ties with others within the society (lower levels of integration) and/or are subject to less social control (lower levels of regulation). Empirical analyses of suicide have consistently supported Durkheim's contention that suicide rates are higher in situations with lower levels of social integration and regulation. For example, parents and married persons have lower suicide rates than childless persons and unmarried persons, given their presumably higher levels of social integration.

Durkheim gave very little attention to the issue of youthful suicide, apart from noting its rarity. In perhaps his only reference to youthful suicide, he cites the analyses of Henry Morselli, one of the moral statisticians. Morselli, using data from the mid-and late-19th century in Paris, London, Petersburg, Vienna, and Berlin, documented the very low incidence of suicide among children in general but a striking increase among youth within cities. As Morselli put it, "In fact, it is in the great centres that the number of suicides amongst the young rises so extraordinarily high" (Morselli 1975/1882, p. 222). Durkheim concurred with Morselli's conclusions and explained the high incidence of youthful suicide in these regions as stemming from social factors:

> It must be remembered that the child too is influenced by social causes which may drive him to suicide. Even in this case their influence appears in the variations of child-suicide according to social environment. They are most numerous in large cities. Nowhere else does social life commence so early for the child.... Introduced earlier and more completely than others to the current of civilization, he undergoes its effects more completely and earlier. This also causes the number of child-suicides to grow with pitiful regularity in civilized lands. (Durkheim 1951, p. 101)

In one of the few sociological analyses to examine teen suicide, Peter Bearman (1991) describes how the anomic situation of modern society may affect young

people. He notes that the "teen today is often a member of two separate societies, the family of origin and the peer group" (p. 517). The teen is integrated into these two "societies," but these social worlds are usually independent of one another and produce conflicting social demands. "The normative dissonance experienced by the teen is the same as anomie," according to Bearman.

**Explaining Cohort Effects** Sociological work on teen suicide has used a Durkheimian perspective and focused on the late-20th-century changes in the age distribution of suicide that were noted above. These scholars have examined ways in which social regulation and integration vary across birth cohorts and can account for the upswing in teen suicide relative to that of adults. Supported by a variety of complex statistical models, their results demonstrate the importance of cohort variations in family structure and relative size, both of which they take to reflect the integration and regulation that young people receive. Cohorts born in the 1980s and 1990s have higher suicide rates relative to adults because they have experienced less integration and regulation through their childhood years (Stockard & O'Brien, 2002a, 2002b).

Using cross-cultural data, researchers also have shown that the impact of cohort effects can vary from one social context to another. In the late 20th and early 21st centuries many modern societies have had similar risks of low levels of integration and regulation for their youth, stemming from changing family structures and numbers of youth relative to adults. Yet only some of these societies have experienced the dramatic upturn in teen suicides relative to adults that occurred in the United States and other nations. Research suggests that an important protective element is social policies that provide greater support to families and children. Teens in societies with these traditions have been much less likely to experience higher rates of suicide (Stockard & O'Brien, 2002a; Stockard, 2003).

## FUTURE DIRECTIONS FOR THE STUDY OF TEEN SUICIDE

Undoubtedly, the most striking development in the area of teen suicide is the dramatic increase of youthful rates relative to adult rates. This issue is much more than scholarly in nature, for the deaths that the increased rates reflect have no doubt brought enormous emotional pain to many people and produced substantial losses in human and social capital for communities throughout the nation.

One of the most important areas for future research on teen suicide will be continued study of the relative rates of youth and adults. To what extent will the narrowed gap between teen and adult rates persist into the future? Do the factors that the recent cohort-related analyses have uncovered continue to predict the age-period variations in suicide?

Prevention efforts will, of course, continue to be very important. Much prevention work concentrates on mental health efforts. These efforts often involve suicide prevention campaigns, mental health treatment for individuals who appear at risk, and training for adults working with youth to help them identify danger signals. Some scholars refer to these efforts as "downstream" policies, those that try to address issues of suicidality after they have already appeared. While these efforts are, of course, absolutely necessary and important, it is also possible to focus change efforts "upstream" and address factors more distally related to suicide risk, such as those identified in the analyses of cohort effects. Using this perspective, upstream approaches to diminishing teen suicide could focus on promoting social integration and regulation for teens through methods such as greater support for families and youth throughout childhood and for the society as a whole (Stockard, 2003).

SEE ALSO Volume 1: *Bullying and Peer Victimization; Freud, Sigmund; Gays and Lesbians, Youth and Adolescence; Mental Health, Childhood and Adolescence;* Volume 2: *Durkheim, Émile; Suicide, Adulthood;* Volume 3: *Suicide, Later Life.*

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***Jean Stockard***

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## TECHNOLOGY USE, ADOLESCENCE

**SEE** Volume 1: *Media and Technology Use, Childhood and Adolescence.*

## TEEN PREGNANCY

**SEE** Volume 1: *Transition to Parenthood.*

## THEORIES OF DEVIANCE

*Crime*, *deviance*, and *delinquency* are often used interchangeably. However, these terms refer to different behaviors. *Crime* refers to an act or a failure to act that is a violation of criminal law. *Delinquency* is a crime that only juveniles can commit. *Deviance* refers to violating social standards or norms about what is collectively considered conventional behavior. Deviance is often antisocial behavior that is typically condemned by the general public. Scholars who study theories that explain why youths commit different acts, whether these acts are truly criminal or merely deviant, overlap. In other words, a theory that explains deviance usually explains crime and delinquency as well. Several contemporary theories that explain why youth commit crime and deviance fall under three broad categories: psychological, sociological, and biological theories of deviance.

Psychological and sociological theories are by far the most commonly used to explain deviance and crime. Whereas psychological theories tend to focus on individual-level factors such as mental health and intelligence as influences on youthful deviance, sociological theories emphasize the role of the social structure and social processes that may impact a youth's life chances. For instance, sociological theories focus on race/ethnicity, gender, sexuality, and social class as the backdrop for understanding why an individual might commit a crime or deviant act. Few theories in the early 21st century are purely sociological or purely psychological. Instead, most of the tested theories of deviance emphasize a social-psychological approach, or a blended approach to understanding why people commit deviance.

Although the specific hypotheses generated by different social-psychological theories vary, these perspectives do share some common themes that may predict the social environments that generate youthful deviance. These themes include:

1. living in an impoverished area,
2. having poor quality relationships with parent(s), which are characterized by inconsistent discipline, abuse, and/or lack of parental affection,
3. poor academic performance, attendance problems, and/or dropping out of school,
4. access to deviant peers or parents who reinforce deviant behaviors (Giordano, Deines, & Cernkovich, 2006).

Four of the most influential social-psychological theories merit detailed discussion: differential association theory, social control theory, labeling theory, and life-course perspective. Differential association theory has the most longevity and has influenced other theories of deviance for nearly a century. Social control theory has had the most powerful impact on policy makers' strategies for how to reduce juvenile delinquency. Although such strategies have failed to produce the results promised, the conservative nature of social control theory has helped it remain a popular explanation of deviant behavior. Labeling theory began a revolutionary way of looking at delinquency as a problem created and maintained by the juvenile justice system itself. No other theory of lawmaking has been as widely accepted or integrated into policy as labeling theory. Finally, the life-course perspective is a theoretical integration, borrowing the best from various theories and helping to explain deviant behavior over longer periods of the life span than any other theory covers.

## DIFFERENTIAL ASSOCIATION THEORY

Prior to the 1930s, most American theories of crime and deviance focused on biological causes, psychological malformations, or economic social conditions. Criminality was either an innate characteristic of an individual or crime was the product of abstract socioeconomic forces in an individual's life. Differential association was the first theory to challenge the existing positions by bridging sociological and psychological theories of behavior. Posited by Edwin H. Sutherland (1883–1950), differential association suggests that all crime and deviance are learned behaviors. Learning to commit crime occurs through associations or relationships with deviant peers or close family members. This theory was a revolutionary idea for its time and has come to be one of the most longstanding and valued theories of crime and deviance.

Differential association theory suggests that individuals learn to become criminal through interactions with immediate family and peers. Sutherland (1947) detailed this process of social learning of deviant behavior in nine postulates:

1. Criminal behavior is learned.
2. Criminal behavior is learned in interaction with other persons in a process of communication.
3. The principal part of the learning of criminal behavior occurs within intimate personal groups.
4. When criminal behavior is learned, the learning includes (a) techniques of committing the crime, which are sometimes very complicated, sometimes very simple; (b) the specific direction of motives, drives, rationalizations, and attitudes.
5. The specific direction of the motives and drives is learned from definitions of the legal codes as favorable or unfavorable.
6. A person becomes delinquent because of an excess of definitions and associations favorable to violation of law over definitions and associations unfavorable to violation of law. This is the principle of differential association.
7. Differential association may vary in frequency, duration, priority, and intensity. This means that associations with criminal behavior and also associations with anticriminal behavior vary in those respects.
8. The process of learning criminal behavior by association with criminal and anticriminal patterns involves all of the mechanisms that are involved in any other learning.
9. While criminal behavior is an expression of general needs and values, it is not explained by those general needs and values since noncriminal behavior is an expression of the same needs and values. Thieves generally steal in order to secure money, but likewise honest laborers work in order to secure money. The attempts to explain criminal behavior by general drives and values such as the money motive have been, and must continue to be, futile, since they explain lawful behavior as completely as they explain criminal behavior. They are similar to respiration, which is necessary for any behavior, but which does not differentiate criminal from noncriminal behavior. (pp. 6–7)

These postulates are generally understood by scholars to mean that criminal behavior is learned from deviant peers and close family members through talking about criminality. Not only must the how-to's of crime be learned by individuals, the norms, rationales, definitions, and attitudes that reinforce the deviant behavior also must be learned. It is these definitions that individuals make based on their associations with deviant peers and family that allow them to commit deviant acts.

From the 1930s through 1947, Sutherland revised this theory several times. Since 1947, however, differential association theory has remained relatively unchanged and has been extensively tested and criticized by scholars. Most research that evaluates differential association has focused on juvenile delinquency, partly because delinquency is considered a group phenomenon in which peer influences are probably the strongest (Vold, Bernard, & Snipes, 2002).

No academic studies have found that delinquency is caused by transmitting definitions and techniques of crime through delinquent peers and family members. However, several researchers have found some support

***Teen Violence.*** *James Watson at the end of his sentencing hearing where he was sentenced to 9 to 12 months for the beating death of Shane Farrell in New Smyrna, FL.* AP IMAGES.

for the general spirit of Sutherland's differential association. For example, Ross L. Matsueda (1982, 1988) found that delinquent youth are more likely to have delinquent peers than are nondeviant youth. Matsueda (1988) also found that just having delinquent peers is not enough to increase risk of deviance. Youth must also have learned definitions favorable to committing crime. In the late 1990s, better statistical techniques and data allowed differential association to be further tested. Costello and Vowell (1999) reanalyzed Matsueda's results with more sophisticated statistical models, and his initial findings were not as strongly supported.

Other studies have shown some support for differential association. For instance, Jang (1999) found that there are direct effects of delinquent peers and school on delinquency in that having delinquent peers is related to committing more delinquency. This relationship, however, is age-limited. The effects of delinquent peers on one's own delinquency tend to increase from early to middle adolescence, reach a peak at the age of mid-13 to mid-15, and then decline. In addition, Battin, Hill, Abbot, Catalano, and Hawkins (1998) tested differential association theory focusing on gangs. The findings showed that the strongest and most consistent factor that predicts delinquency is prior delinquency. However, associating with peers who engage in delinquency plays a strong role in predicting delinquency as well.

Despite the fact that there is mixed support for differential association, most scholars who study deviance, delinquency, and crime still pay close attention to the issues that Sutherland raised in the early twentieth century. Ronald L. Akers (1998) and others added to the original tenets of differential association by integrating specific psychological learning processes such as operant conditioning. These additions are generally called *social learning theories* as they specify the process of actual learning better than Sutherland's original work. Most testing of social learning theories have shown evidence for the ideas proposed in differential association such as delinquent peer association and learning criminal behavior from close relationships with peers and family.

The influence of differential association extends far beyond social learning theories. The original concepts of delinquent peers or close family members are tested in most major theoretical tests of delinquency in the 21st century, even if the central purpose is not to test differential association. No other criminological theory has been as influential or as enduring.

## SOCIAL CONTROL THEORY

Differential association is readily comparable to the next theory of deviance: social control theory. Both theories focus on explaining juvenile offenses more than adult crime, and both theories consider similar influences, but the order in which the influences act vary across the two theories. For differential association theory, an individual first has deviant peer and/or family associations. Next, the individual learns to become a criminal from those peers and family associations. Finally, the individual commits the criminal or deviant act. Conversely, social control theory is based on the assumption that deviant peers are more of a byproduct of being a deviant. In colloquial terms, "birds of a feather flock together": Like-minded, deviant juveniles congregate because they share a common interest in deviance (Glueck & Glueck, 1950, p. 164). According to most social control theorists, first an individual commits a criminal act; the individual then finds other deviants or criminals to associate with after already committing deviance.

More important than peers, however, is the role of social conformity in this theory. In 1957 Jackson Toby argued all young people have "stakes in conformity," meaning that juveniles are aware they might lose something by breaking the law. Toby's ideas on social

conformity were expanded and are now most often associated with the work of Travis Hirschi (1969), which begins with some unique assumptions compared with other theories of deviance. First, social control theories focus on the question: Why do people conform? The answer according to this perspective is because social control prevents individuals from committing crimes.

According to Hirschi (1969), there is no specific criminal motivation, but instead all individuals have a natural motivation to commit crime. Hirschi argued that deviance results from an individual having a weak or broken bond to society. Society in social control theory is specified for youth as family, school, church, and other conventional activities. Hirschi proposed that four primary bonds to society are what prevent juveniles from committing deviant acts. These bonds are: attachment, commitment, involvement, and belief (Hirschi, 1969).

*Attachment* refers to affectional ties that a youth has toward others, predominantly parents. Attachment is the building block necessary for all humans to internalize values and norms and thus be socially controlled (Vold et al., 2002). Unlike differential association theory, an individual can have affectional ties to deviant family members or peers and not commit deviance. Attachment to anyone should foster conforming behaviors in people.

The next social bond, *commitment*, refers to the level of investment individuals have in conventional society and in their personal long-term goals. The more an individual feels invested in schools and future careers, the less likely that individual will commit any deviant behaviors that may threaten society. *Involvement* is the actual tangible activities individuals participate in to show their commitment to the social structure. Moreover, involvement in conventional activities such as sports, extracurricular school activities, or religious activities leaves little or no time for deviant activities. The last bond, *belief*, refers to how much individuals believe in the legitimacy of the social structures around them. Hirschi (1969) argued that if individuals believe that they should obey the law and rules of society, they usually will.

Many scholars have tested Hirschi's (1969) social control theory over the past 40 years. Most research shows support for two of the four bonds: attachment and commitment (Costello & Vowell, 1999). There is no empirical evidence showing that belief and involvement are related to delinquency, as social control theory predicts. In the original study Hirschi conducted during the 1960s to develop social control theory, he could not find support for involvement. Many studies have found the opposite to be true: Heavy involvement in conventional activities, including extracurricular sports and having a part-time job, predict delinquency (Begg, Langley, Moffitt, & Marshall, 1996; Ploeger, 1997). Moreover, tests that focus on the belief bond also have not supported social control theory (Marcos, Bahr, & Johnson, 1986; Massey & Krohn, 1986). Once delinquent peers are accounted for in these tests of social control, the impact of all four bonds decreases (Empey, Stafford, & Hay, 1999).

From the time social control theory emerged through the mid-1990s, it was an extremely popular explanation of deviance with policy makers. The policy implications of social control are fairly easy to implement and were appealing to the designers of tough-minded crime policies. The idea is to provide more opportunities to conventionally bond to legitimate social structures for young people. However, many of the programs implemented in the name of social control theory did not reduce deviant behavior among youth (Empey et al., 1999).

Social control theory has since waned in popularity partially because it is considered by many academic scholars to be too conservative (Greenberg, 1999). In addition, social control assumes an innate criminal nature of youth and adults that is disconcerting to some academics who believe that people are not inherently bad or criminal. Many scholars who study crime refer back to Sutherland's (1947) work on differential association in which he stated, "People are not inherently antisocial. If young people violate the law, it is because they have learned to do it" (p. 6).

### LABELING THEORY

The theories discussed so far have focused on explaining deviant and law-breaking behavior. The next theory, labeling theory, became popular in the 1960s and focuses on lawmaking. According to the labeling perspective, peers, social control, and the other factors previously discussed are not relevant to explaining the true problem with delinquency. This perspective contends that the most important factor to study when focusing on crime is the formal label a youth receives as a result of being caught committing a delinquent act. The actual deviant behavior is secondary in importance. The labeling theorists instead ask: Who applies a deviant or criminal label? What determines when and to whom that label is applied? (Vold et al., 2002). It is the label itself that causes further criminal behavior in a process called *deviance amplification*.

Labeling theorists begin with a set of assumptions about the social structures and the nature of people that are quite different from those used by social control and differential association theorists. Labeling theorists believe that society is characterized by social conflicts. The so-called "winners" in these social conflicts are the people who are in the most powerful positions in terms of social class, status, wealth, and power. This powerful group, the

elites, tends to have the most influence on laws about criminality and deviance. The elites tend to protect their own interests by defining lower-class behaviors as deviant or criminal. As a consequence, labeling theorists believe that laws and the persons involved in the legal system are responsible for generating crime by labeling the least powerful people as criminal (Empey et al., 1999).

Labeling theory emerged predominantly from the works of two theorists and over a 30-year period beginning in the 1930s (Vold et al., 2002). Frank Tannenbaum (1938) argued that when a child becomes enmeshed with the juvenile justice system, those experiences turn him or her from the occasional misbehaver to the active delinquent. Tannenbaum detailed how adult reactions become stronger and the perceptions of mischief become perceptions of evil. The child begins to accept the evil label by adults, further amplifying the problem.

Edwin Lemert (1951) added two additional concepts to labeling theory: primary and secondary deviance. Lemert argued that the first delinquent act may go undetected and unpunished, and this is common among youth from all social backgrounds (Empey et al., 1999). Those youths who commit deviant acts and are not caught, punished, or labeled usually desist their mischievous behaviors. However, juveniles who are caught are stigmatized by the label "delinquent." Usually the newly labeled delinquent is watched more closely and with stricter rules that may be too difficult to follow. Thus the youth will likely adapt to the new label by committing secondary deviance: additional crimes that result directly from the label.

Both Lemert (1951) and Tannenbaum (1938) believed that this labeling process was a gradual one that occurred over a period of time. A primary deviance would occur, followed by an initial labeling, the acquisition of a delinquent identity, and then secondary deviance. The deviance would be further amplified each time the youth was caught and relabeled by the formal juvenile justice system. Moreover, the labeling process would eventually lead to the juvenile accepting the label as a master status or a powerful label that may overshadow all other aspects of his or her identity. The master status as a delinquent would eventually lead to a life-long criminal career.

This process of deviance amplification following the acquisition of a formal deviant label does not affect all juvenile offenders equally. Howard Becker (1963) argued that juvenile justice administrators use labeling selectively. The least powerful youth in American society, such as the impoverished and racial and ethnic minorities, were more likely to be labeled as deviants than others.

By the 1960s and 1970s, when crime among youth was a top national concern for the first time, there was initial excitement about labeling theory. Empey and colleagues (1999) described the excitement: "Were it not for punitive reactions to mischievous children, entangling them in a self-fulfilling prophecy, there would be few career criminals" (p. 260). Labeling theorists outlined several reforms for the juvenile justice system to decriminalize, divert, and deinstitutionalize juvenile offenders to prevent the application of stigmatizing labels and summarily end deviance amplification. Many of these programs were implemented in the late 1960s and remain in existence at the beginning of the 21st century (Empey et al., 1999). However, the excitement over labeling theory faded quickly because of some theoretical problems.

The first problem is that scholars could find only limited support that the label was the problem causing deviance amplification. Although evaluations of labeling theory did find support for the idea that, once labeled, a youth was likely to commit more deviant acts, other factors were more important. In all of the tests of labeling theory, prior deviance was the largest predictor of secondary deviance, not the label (Empey et al., 1999).

One of the most influential tests of labeling theory was conducted by Smith and Paternoster (1990). These researchers found that juvenile offenders referred to juvenile courts were more likely to be referred again to the court for further offenses, which initially appeared to be consistent with labeling theory. However, a closer inspection of the data showed that it was not the juvenile court referral that caused the additional delinquency; rather, the juveniles who were referred to court were considered to be higher risk than those not referred because of the seriousness of prior convictions, the lack of capable guardianship in their homes, and other socioeconomic factors.

Labeling theory has not been abandoned outright, despite the scholarly evidence against it. Instead, labeling theory has been revamped by such academics as John Braithwaite (1989), who posits a theory of reintegrative shaming in lieu of the stigmatizing labels. In general, Braithwaite's theory has received some support and is an area in which the basic legacy of labeling theory is still used by scholars and policy makers in the early 21st century. However, labeling theory does not appear to be well supported independent of other socioeconomic factors that better predict youths' propensity toward deviant behavior.

## LIFE-COURSE PERSPECTIVES ON DEVIANCE

The life-course perspective provides one of the newer frameworks for understanding deviance and crime. In general, life-course perspectives contain theoretical tenets about how changes in an individual's life determine the probability of that person becoming a criminal or ending a criminal career. Life-course perspectives integrate social,

psychological, and environmental factors, which makes these theories more comprehensive and inclusive than other theories of crime. Researchers who study life-course perspectives typically follow a cohort or group of youths over a period of time, which allows scholars to document how changes in the life course affect youths' future opportunities and likelihood of committing deviant acts.

The term *perspective* is used instead of *theory* because one theoretical model does not unify the wide breadth of ideas that fall into this general category. Indeed, if one asked a sociologist and a psychologist about life-course theories of deviance, one may get surprisingly different answers. In general scholars who study life-course perspectives believe that a wide range of factors contribute to deviance at different points in an individual's life. Yet there is not a general agreement about which specific factors are most important to study. For these reasons, life-course perspectives should be divided into biosocial developmental issues and sociological issues.

**Biosocial Life-Course Theories** Biosocial theories suggest that some biological factors may predispose some youth to commit crime in addition to the social factors that are known to be related to crime. These biological factors usually capture some quality that inhibits normal biological development. For example, levels of hormones such as testosterone, physiological development indicators such as puberty onset, nutrition levels during formative years, or brain chemistry during different developmental ages have been linked to delinquent behavior.

***Biosocial life course: Pubertal development.*** One of the most important biosocial areas of study related to life-course perspectives focuses on pubertal development and deviance. In fact, researchers have long noted that the onset of puberty for boys often coincides with the onset of delinquency (Felson & Haynie, 2002). Scholars have tested whether or not that coincidence indicates that delinquency and puberty are related to each other. For boys, pubertal development may be as important as peers and school performance in predicting deviant behaviors. Felson and Haynie showed that puberty predicts violent crime, property crime, illicit substance use, and precocious sexual behavior. However, this study and others cannot accurately determine the exact social or biological mechanisms that make this relationship apparent.

The relationship between puberty and deviance is different for girls and boys. Girls who enter puberty earlier than average are more likely to engage in deviant behaviors than girls who begin puberty at an average or older age. Girls who attend coeducational or mixed-sex schools are even more likely to be affected by early puberty, as boys tend to have an aggravating effect on girls' deviance (Caspi, Lynam, Moffitt, & Silva, 1993).

***Biosocial life course: Neurological development.*** The widely known research of Terrie Moffitt (1993) is often credited for beginning a new and distinct discussion of life-course perspective and deviance. Moffitt created a taxonomy, or classification system, for two distinct types of offenders: adolescence-limited deviance and life-course persistent deviance. The first group, adolescence-limited, contains the majority of youthful offenders. These juveniles commit delinquent acts during their teen years and quickly end their criminal careers before adulthood. The offenders who fall into this group are for the most part normal youth who do not commit serious crimes.

Life-course persistent offenders, on the other hand, are far more problematic deviants. Moffitt (1993) suggested that individuals who have an early age of onset, or in other words begin committing antisocial acts during early childhood, will continue through adulthood committing more serious crimes than the other group. She argued that a neuropsychological impairment is the root cause of delinquency. Neuropsychological refers to "anatomical structures and physiological processes within the nervous system [that] influence psychological characteristics such as temperament, behavioral development, cognitive abilities, or all three" (Moffitt, 1993, p. 681). These impairments can be inherited or caused by maternal alcohol or drug use while in utero, poor prenatal nutrition, brain injury, or exposure to toxins such as lead. Moffitt, Lynam, and Silva (1994) argued that neuropsychological impairments lead to poor verbal skills and low self-control, which in turn causes delinquency.

Moffitt's (1993) theory has been the subject of many scholarly debates and research. The age of onset of criminal activities as well as desistance are the two factors that have been examined most frequently. Although Moffitt's own tests and other psychological research have shown some support for her theory (Donnellan, Ge, & Wenk, 2000), sociological studies show very limited support without factoring in sociological variables. For instance, one study found that, irrespective of the age of onset, criminal trajectories tended to specialize (Piquero, Paternoster, Mazerolle, Brame, & Dean, 1999). This finding suggests that there is no clear difference between adolescent-limited and life-course persistent offenders. Others found that parental and school reactions to deviant behavior are associated with long-term changes in children's behavior (Simons, Johnson, Conger, & Elder, 1998). Thus, social factors during development are more important in determining delinquency trajectories than neuropsychological traits.

The mixed support for this theory may reflect the variety of perspectives of the researchers who are interested in Moffitt's (1993) taxonomy. Sociologists are unlikely to believe in the more deterministic elements of her work, whereas psychologists may not be as willing to accept some

of the social factors Moffitt addresses. Because Moffitt's (1993) theory is relatively new, future studies are sure to elaborate and refine her original work. Sociological studies of the life course are already working on refining her psychological ideas in the contexts of the social world.

**Sociological Life-Course Theories** Although not necessarily in agreement with Moffitt's (1993) pivotal work, sociological life-course researchers acknowledge the many contributions of her work. The most widely cited sociological life-course work has been conducted by Robert Sampson and John Laub (1993, 2005). Sampson and Laub's studies of juvenile delinquency through adult criminality begin with a direct discussion of Moffitt's work.

In a 2005 publication, Sampson and Laub outlined why they agree and disagree with Moffitt's ideas. Sampson and Laub moved away from biosocial determinism in favor of a sociological explanation of why people begin, persist, and desist their criminal careers or trajectories. They also see criminal careers as well as the life course as dynamic. Changes that happen during individuals' lives were more important to Sampson and Laub than any early childhood or neonatal factors that Moffitt emphasized.

Sampson and Laub (1993) presented an age-graded theory of informal social control. They argued that adolescents tend to not commit deviant acts when informal social controls are working. If a youth is properly supervised by fair and loving parents, that child is not likely to engage in deviance. Conversely, a lack of informal social controls, including poor parenting, low supervision, erratic or harsh discipline, and weak ties to schools, are all linked to predicting juvenile delinquency. Sampson and Laub's ideas were based in part on the tenets of Hirschi's (1969) social control theory, discussed earlier.

Sampson and Laub (1993) also maintained that informal social controls change over the life course. As adolescence ends and adulthood begins, social controls also change. Social capital now becomes an important form of social control. The more social capital individuals have, the less likely they are to commit a deviant act that will threaten their social capital. The most important forms of social capital according to this theory are marriage and job stability. Thus, securing adult milestones such as employment and marriage are linked to the ending of adolescent crime because individuals do not want to risk losing these social gains.

Adolescents can fail to make a positive transition to adulthood if their lives are marked by negative turning points or milestones. Sampson and Laub (1993) argued that prolonged incarceration, heavy drinking, and subsequent job instability during the transition to young adulthood will exacerbate criminal careers.

Numerous theoretical tests of Sampson and Laub's work (1993) that show support for their version of life-course theory have been published in criminology and sociology journals. Nagin, Farrington, and Moffitt (1995) studied Moffitt's (1993) adolescence-limited offenders along with life-course persistent offenders under Sampson and Laub's age-graded model of social control. This study followed offenders until age 32. The results show that adolescent-limited offenders do cease most serious types of crimes throughout adulthood. These offenders committed only minor infractions between the ages of 18 and 32, such as petty theft from employers and minor substance use. They also tended to have greater job stability and less family disruption than the chronic offenders in the study. The adolescence-limited offenders were careful to avoid committing crimes with a high risk of conviction that might jeopardize their work. These offenders did not engage in spousal abuse that might harm familial relationships. Thus, the theory of adolescence-limited offenders "aging out" of crime because of functioning informal social controls is well supported.

Several other tests show support for Sampson and Laub's (1993) theory in regard to adult criminal behavior. One study found that for adult convicted felons, living with a wife is associated with lower levels of offending, whereas living with a girlfriend is associated with higher levels of offending (Horney, Osgood, & Marshall, 1995). Another found that social capital is more important in terms of preventing adults from offending than threat of legal punishment (Nagin & Paternoster, 1994). Individuals in this study who were more concerned about losing their social capital also ranked high on scales measuring forethought and other negative consequences of criminal behavior.

**Future Directions of Life-course Perspectives** Whether sociological, psychological, or biosocial, it is clear that life-course perspectives will remain at the forefront of theories of deviance. Many life-course theoretical questions remain unanswered in part because of data limitations; there just are not enough longitudinal studies that follow children through adulthood to test all the competing theories of deviance. As data become more plentiful, theoretical development in this perspective is likely to continue to integrate the ideas of multiple disciplines.

SEE ALSO Volume 1: *Aggression, Childhood and Adolescence; Bandura, Albert; Crime, Criminal Activity in Childhood and Adolescence; Juvenile Justice; Peer Groups and Crowds; Puberty; School Violence;*

Volume 3: *Crime, Criminal Activity in Adulthood; Incarceration.*

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***Gini R. Deibert***

# THOMAS, W. I.

***1863–1947***

William Isaac Thomas was one of the most prolific and progressive sociologists of the early 20th century. The son

***W. I. Thomas.*** **COURTESY OF THE AMERICAN SOCIOLOGICAL ASSOCIATION.**

of a Protestant minister, Thomas was born in Virginia. He received his B.A. at the University of Tennessee and went on to hold teaching positions at several academic institutions, including the University of Chicago where he completed his Ph.D. in sociology. Thomas has made significant contributions to the field of sociology and the study of the life course in particular. He is best known for the *Thomas theorem*, which states, "If men define situations as real, they are real in their consequences" (Thomas & Thomas, 1928, p. 572). The book in which the theorem first appears, *The Child in America*, was coauthored by a graduate student, Dorothy Swaine (1899–1977), Thomas's second wife.

The Thomas theorem was likely inspired by his exposure to German philosophy and phenomenology—Thomas was an avid reader of German philosophy and studied in Germany for a year. The theorem can be interpreted in different ways. If one were to emphasize its phenomenological roots, the Thomas theorem means that reality is always subjective, contextual, and constructed via social interaction. In this context, the plural noun *men* connotes the collective endeavor that underlines the social construction of reality (i.e., definitions of situations are arrived at collectively and are mediated by culture and history). By contrast, a positivistic reading of the Thomas theorem suggests a type of personal or collective delusion; the individual erroneously defines a situation as real even in the face of objective evidence to the contrary. In this vein, Robert Merton (1957) links the Thomas theorem to "self-fulfilling prophecies" and suggests that a "false" definition of a situation could become real if collectively shared. So, for example, the belief that the stock market is about to crash could cause an otherwise robust economy to fall into a recession. In a sense, a positivistic interpretation of the theorem implies that people sometimes fall in a sort of collective trance that causes them to believe a falsehood and act toward it as if it were true.

A close examination of Thomas's work suggests that he took a position somewhere between extreme objectivism and subjectivism. Indeed, the paragraph immediately following the theorem in *The Child in America* reads as follows: "The total situation will always contain more and less subjective factors, and the behavior reaction can be studied only in connection with the whole context, i.e., the situation as it exists in verifiable, objective terms, and as it has seemed to exist in terms of the interested persons" (1928, p. 572). Also, it is unlikely that Thomas intended for the theorem to apply to a limited class of human interactions (e.g., explaining how errors in judgment occur on a mass scale). Rather, as indicated in the excerpt below, the theorem simply articulates his previous research on what he believed to be a universal law of human interaction and personality.

> the human personality is both a continually producing factor and a continually produced result of social evolution, and this double relation expresses itself in every elementary social fact; there can be for social science no change of social reality which is not the common effect of pre-existing social values and individual attitudes acting upon them. (Thomas & Znaniecki, 1918, p. 5)

The phrase "every elementary social fact" is particularly significant in this context. It implies that it is not just a certain class of social facts (i.e., false perceptions) that fall under the Thomas theorem, but the theorem is a fundamental principle that applies to a wide range of social actions. In the case of the economic example, the Thomas theorem could also point to more foundational questions, such as how people come to define economic prosperity in terms of competitive trade among large corporations.

Interestingly, Thomas attributes the origins of this unique methodology to a happy accident, which is cited in Paul Baker's 1973 essay on Thomas:

> It was, I believe, in connection with *The Polish Peasant* that I became identified with "life history"

> and the method of documentation. . . . I trace the origin of my interest in the document to a long letter picked up on a rainy day in the alley behind my house, a letter from a girl who was taking a training course in a hospital, to her father concerning family relationships and discords. It occurred to me at the time that one would learn a great deal if one had a great many letters of this kind. (p. 250)

Since its publication, *The Polish Peasant* has been criticized for its negative portrayal of Polish immigrants and for generalizations that did not necessarily grow out of the empirical data at hand. Despite these shortcomings, *The Polish Peasant* remains a seminal study that showed (a) identity is not an innate, stable trait but a fluid and malleable social form; and (b) individual identity is mediated by the broader social forces of culture and history. Thomas and Znaniecki's (1918) focus on how the individual fares in society over time continues to be the central theme of the study of the life course and social psychology in general.

*The Polish Peasant* and Thomas's other works challenged gender and ethnic stereotypes of marginal identities. For example, in *Sex and Society*, Thomas (1907) states that "the psychological differences of sex seem to be largely due, not to differences of average capacity, nor to difference in type of mental activity, but to differences in the social influences brought to bear on the developing individual from early infancy to adult years" (p. 438). Thomas was similarly critical of what is now referred to as objectification of women:

> Woman was still further degraded by the development of property and its control by man, together with the habit of treating her as a piece of property, whose value was enhanced if its purity were assured and demonstrable. As a result of this situation man's chief concern in women became an interest in securing the finest specimens for his own use, in guarding them with jealous care from contact with other men, and in making them together with the ornaments they wore, signs of his wealth and social standing. (pp. 460–461)

Thomas's views on ethnic minorities were equally progressive. For example, in *Old World Traits Transplanted*, he and his coauthors warn against "demanding from the immigrant a quick and complete Americanization through the suppression and repudiation of all the signs that distinguish him from us" (1921, p. 281). They go on to note that the demand for the "destruction of memories" for immigrants is an oppressive totalitarian impulse shared by conservative Americans and radical Communists. In this sense, Thomas's reverence for memory and its role in identity formation is another hallmark in the study of the life course.

Thomas's professional career was eclipsed by a sex scandal in 1918. The 55-year-old Thomas was arrested along with a 24-year-old woman who was married to a U.S. Army officer serving in France. The couple was charged with registering under a false name at a hotel and later tried at the Chicago's Morals Court for disorderly conduct and other charges. It is rumored that Thomas's personal politics, his radical views on gender relations, and his wife's leadership of the Woman's Peace Party played a role in the Federal Bureau of Investigation's aggressive approach to his case. Thomas and the woman with whom he was having an affair were eventually cleared of the charges. Nonetheless, Thomas was dismissed from his position at the University of Chicago. Additionally, as a result of the scandal, the Carnegie Foundation, which was funding Thomas's research on immigration at the time, insisted that his name be removed from a forthcoming publication. That manuscript, *Old World Traits Transplanted*, instead gave writing credit to Robert Park (1864–1944) and Herbert Miller (1875–1951), both of whom contributed only minor parts to the book.

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***Amir Marvasti***

## TIME USE, CHILDHOOD AND ADOLESCENCE

**SEE** Volume 1: *Activity Participation, Childhood and Adolescence; Media and Technology Use, Childhood and Adolescence; Sports and Athletics.*

## TRANSITION TO MARRIAGE

At the turn of the 21st century Americans were entering first marriages at later ages than at any other time in the previous hundred years. Combined with increasing rates of

cohabitation and a growing proportion of births occurring to unmarried mothers, this suggests a diminished role for marriage in the lives of many young adults. However, it is important to study the transition to marriage for a number of reasons. Demographers estimate that the vast majority of Americans will marry, and most people continue to report that they value marriage highly. Marriage tends to be more stable than other types of intimate unions and confers greater legal rights and protections than does nonmarital cohabitation. Marriage also is associated with positive outcomes such as improved economic well-being, reduced risk-taking behaviors, and relatively higher levels of child well-being. The timing of the transition to marriage is important, with very early marriages associated with some negative outcomes. With a focus on the experience of young adults, this entry reviews trends and differentials in the transition to marriage, patterns of family formation outside marriage, and existing knowledge about the association between marriage and the well-being of adults and children.

## SHIFTING PATTERNS OF MARRIAGE ENTRY

The timing of the transition to marriage has changed considerably over recent decades. Although ages at first marriage decreased during the 1950s, they increased rapidly in the decades that followed. In 2006 the median age at first marriage in the United States reached 27.5 years for men and 25.5 years for women (U.S. Census Bureau, 2007), the latest marriage ages at any time in the previous century. These trends have reshaped the family lives of young adults dramatically. Whereas 64% of women age 20 to 24 had ever been married in 1970, the same was true of only 31% in 2000. Among men age 20 to 24, roughly 55% had ever been married in 1970, compared with only 21% in 2000 (U.S. Census Bureau, 1991, 2008). Similar patterns of marriage delay also are observed in many other industrialized countries. Average ages at first marriage throughout much of Western Europe are as high as or higher than those observed in the United States (Kiernan, 2000).

However, at least in the United States these patterns seem to be more about marriage delay than about eschewing marriage altogether. Demographers estimate that nearly 90% of recent cohorts of U.S. women will marry (Goldstein & Kenney, 2001). The vast majority of U.S. high school seniors surveyed in the late 1990s reported that having a good marriage and a happy family life was extremely important (Thornton & Young-DeMarco, 2001). The importance of marriage in the United States also is reflected in a strong social movement demanding marriage rights for same-sex couples and in the sometimes heated and emotional debate about the nature of marriage that this movement has generated (Hull, 2006). However, the fraction of people expected to marry is lower in many European countries than in the United States, perhaps indicating the relatively lower salience of marriage in these countries. For example, fully 40% of Swedish women born in 1965 are expected to be never married at age 50, as are roughly 30% of such women in Norway, Finland, and France (Prioux, 2006).

## FAMILIES FORMED OUTSIDE MARRIAGE

Although young adults in the United States are less likely to marry than they were in the past, many are choosing to live with a romantic partner. In the last two decades of the 20th century and the first decade of the 21st rates of nonmarital cohabitation (living with a partner outside marriage) increased substantially. Whereas only 11% of first marriages formed between 1965 and 1974 were preceded by cohabitation, the same was true of 56% of first marriages formed in the early 1990s (Bumpass & Lu, 2000, Bumpass & Sweet, 1989). At the beginning of the 21st century, nearly one-third of all current unions among women age 19 to 24 were nonmarital cohabitations and 38% of these young women had ever cohabited (Bumpass & Lu, 2000). High levels of nonmarital cohabitation also are observed in many other parts of the world, including regions of Northern and Western Europe as well as many Central American and Caribbean nations (Fussell & Palloni, 2004, Kiernan, 2000). For example, 83% of women are expected to enter a nonmarital cohabitation before age 45 in France, as are roughly two-thirds of women in Sweden (Heuveline & Timberlake, 2004).

Nonmarital cohabitation in the United States tends to be relatively short-lived, with half of these unions lasting no more than about one year and only 1 in 10 lasting five years or longer (Bumpass & Lu, 2000). Roughly half of U.S. cohabiting unions eventually end in marriage (Bumpass & Lu, 2000). Cohabitation tends to be most common among those with relatively less education, although it is widespread among all educational groups. For example, 59% of women with less than 12 years of schooling had ever cohabited in the mid-1990s, compared with 37% of women with at least 4 years of college (Bumpass & Lu, 2000).Cohabitation also tends to be relatively more common among individuals from economically disadvantaged families and those who lived apart from at least one parent during childhood (Bumpass & Sweet, 1989). Although reasons for cohabitation are varied, individuals with relatively fewer economic resources may feel less able to afford the perceived economic responsibilities associated with marriage.

In addition to losing its dominance as a setting for intimate relationships, marriage has lost some of its dominance as a setting for childbearing. Roughly 37% of all births in the United States in 2005 were to unmarried

mothers, compared with 11% in 1970 (Martin, Hamilton, Sutton, Ventura, MeNacker, Kirmeyer, et al., 2007, Ventura & Bachrach, 2000). The fraction of births occurring outside marriage is even greater among relatively younger women, representing more than half of all births to women age 20 to 24 and more than 80% of births to women under age 20 (Martin et al., 2007). These trends are driven by a number of factors, including declining rates of marriage in young adulthood, increased rates of childbearing among unmarried women, and declining rates of childbearing among married women. Also, women are considerably less likely to marry in response to a pregnancy than they were in the past. In the early 1950s more than half of all women age 15 to 29 married before a first premaritally conceived birth in the United States, compared with less than one-quarter in the early 1990s (Ventura & Bachrach, 2000).

Delayed entry into marriage, combined with a loosening of the connections between marriage and life course events such as entry into committed romantic relationships, entry into parenthood, school completion, and leaving the parental home, has led a number of scholars to argue that marriage has become less important as a marker of the transition to adulthood (Corijn & Klijzing, 2001, Furstenberg, Kennedy, McLoyd, Rumbaut, & Settersten, 2004). One study finds that whereas well over 90% of Americans believe that completing one's education, achieving financial independence, and working full-time are at least somewhat important to being considered an adult, only 55% say the same thing about marriage (Furstenberg et al., 2004). Other studies indicate that people in their teens and twenties place less emphasis on marriage and greater emphasis on qualities such as "accepting responsibility for one's self" and "making independent decisions" in self-identifying as adults (Arnett, 2000, p. 473). Contemporary cohorts of young people arguably tend to view marriage and parenthood as life choices rather than prerequisites for becoming an adult (Furstenberg et al., 2004).

The last decades of the 20th century and the first decade of the 21st brought delayed entry into marriage, growth in the proportion of young adults living with an unmarried partner, and an increase in the proportion of births occurring to unmarried parents. Although marriage is less dominant than it once was over the organization of family life, many family scholars argue that it remains important in American society. Sociologist Andrew Cherlin argues that marriage "has been transformed from a familial and community institution to an individualized choice-based achievement" (Cherlin 2004, p. 858). Recent shifts in marriage patterns likely result from a complex and deeply intertwined set of social and economic factors, many of which have deep historical roots. These include shifts in the labor market and educational opportunities of women and men, changing attitudes toward sex and childbearing outside marriage, improved control over the link between sex and reproduction, and growth in the importance individuals place on personal fulfillment. The fact that many people view school attendance and marriage as incompatible provides a nice twist on the life course theme of "linked lives." Although recent patterns of transition into marriage are well documented, there is less agreement about what marriage will look like in the future. The likely course of future change in marriage patterns is an important area of study and debate among social scientists.

## DIFFERENTIALS IN EARLY ADULTHOOD MARRIAGE

A number of background factors are associated with the likelihood of becoming married before age 25. For example, there are substantial racial and ethnic differences in the likelihood of early marriage. Although 63% of White women and 61% of Hispanic women had transitioned to marriage by age 25 in 1995, the same was true of only 37% of non-Hispanic Black women and 44% of non-Hispanic Asian women (Bramlett & Mosher, 2002). Race differences in marriage extend into the later life course, with over 90% of recent cohorts of White women expected to ever marry, compared with roughly two-thirds of recent cohorts of Black women (Goldstein & Kenney, 2001).

Religion and region of residence also are associated with differences in early adulthood marriage patterns. Women who have no religious affiliation or who report that religion is not important to them are less likely than others to marry by age 25. Women in the Northeast are less likely to marry by age 25 than are women in other regions of the country. Although regional variation in the proportion ever married largely levels off by age 30, differentials by religiosity persist into older age groups (Bramlett & Mosher, 2002). Several of the same factors that predict a greater overall probability of marriage during one's lifetime are associated with a reduced probability of marrying during the early adult years: A number of studies demonstrate that people with relatively higher levels of education are more likely to marry over the course of their lives than are those with relatively less schooling, yet having completed more years of education is associated with a reduced probability of marrying by age 25. Estimates suggest that whereas roughly two-thirds of women with no more than a high school degree marry by age 25, the same is true of only half of women with relatively more schooling.

Variation in patterns of family formation across social class and racial/ethnic groups has been of particular interest to social scientists. Although better-educated women increasingly delay both marriage and parenthood, less-educated

women delay marriage but not parenthood (Ellwood & Jencks, 2004). Black Americans are both less likely to marry than non-Hispanic Whites and more likely to bear children outside marriage. These patterns lead to considerable differences in the context in which children are born, with a much larger proportion of births occurring within marriage among Whites and the most educated than among Blacks and the least educated. The causal factors underlying social class and racial/ethnic differences in patterns of family formation, however, are not well understood. Sociologists William J. Wilson and Kathryn Neckerman (1987) argue that high rates of unemployment and incarceration among men in poor urban areas reduces the number of attractive male marriage partners. Yet most studies find only a relatively modest contribution of the availability of "marriageable" men to group differences in marriage patterns. Variation across groups in attitudes toward marriage is similarly unable to fully explain racial and socioeconomic gaps in marriage behavior (Edin & Kefalas, 2005; Ellwood & Jencks, 2004). The search for alterative explanations for these patterns remains an important area of future research.

## MARRIAGE, HEALTH, AND WELL-BEING

Marriage is associated with a number of beneficial outcomes for men and women, including higher family income, improved health, and reduced risk-taking behavior (Waite, 1995). Although most children fare well regardless of the structure of their families, growing up with two biological parents who are married to each other rather than with a single parent or two cohabiting parents is associated with relatively higher child well-being (Amato, 2005). Scholars disagree, however, about the extent to which marriage causes these positive outcomes as opposed to people with higher preexisting levels of health, resources, and well-being being more likely to marry in the first place. Also, relatively little is known about whether these potential benefits of marriage extend to individuals who marry during the earliest years of adulthood. Attempts to answer this question are complicated by the fact that individuals who marry early in life tend to come from relatively more disadvantaged backgrounds than individuals who delay marriage. Marriage before age 20 also is associated with other negative outcomes for individuals, including a higher risk of experiencing a subsequent divorce than is the case for individuals who marry relatively later in life (Martin & Bumpass, 1989). Many explanations have been offered to explain this relationship. For example, relatively young people may be less able to predict what kind of partner would make the most compatible long-term match or may have fewer economic or emotional resources to draw on in support of their marriages.

In considering the potential benefits of marriage in the contemporary United States it is important to keep in mind that marriage brings certain rights and legal protections that are less easily available or not available to unmarried couples. Laws give special recognition to married couples in a number of domains, including their emotional attachment, parental status, and economic organization and resources (Hull, 2006). For example, the Family and Medical Leave Act gives spouses but not unmarried partners the right to take time off from work to care for a partner with a serious health condition. Married individuals generally can receive health insurance and other benefits through a spouse's employer and are subject to special rules governing inheritance and taxation. In court proceedings married partners receive protection from testifying against a spouse. Such legal and economic differences in the status of married versus unmarried couples have received considerable attention in debates about the extension of marriage rights to same-sex couples.

## FUTURE DIRECTIONS

Although Americans increasingly are delaying the transition to marriage, most young people eventually marry and the desire to marry is widespread. However, young adults have more latitude in choosing what kinds of romantic partnerships to enter, when to enter those relationships, and the relationship context in which to bear and raise children. Although scholars know a considerable amount about patterns of marriage, much remains to be learned. For example, causal factors underlying differences in marriage patterns across educational and racial/ethnic groups are not well understood. Also, although marriage is associated with many positive outcomes, the processes underlying those outcomes are not well understood. How much of the relatively greater physical, emotional, and socioeconomic well-being of married versus unmarried people can be attributed to causal effects of marriage per se and how much is due to preexisting differences between people who enter marriage versus those who do not? Also, the extent to which any potential benefits of marriage extend to young adults is unclear.

There is much disagreement about the likely direction of change in future patterns of marriage. Will age at first marriage continue to increase over time? Will there be a meaningful reduction in the proportion of individuals who marry over the course of their lives? Answers to these questions are an important focus of ongoing efforts to understand the meaning and nature of marriage in the 21st century.

**SEE ALSO** Volume 1: *Dating and Romantic Relationships, Childhood and Adolescence; Family and Household Structure, Childhood and Adolescence; Sexual Activity, Adolescent; Transition to Parenthood;* Volume 2: *Cohabitation; Marriage.*

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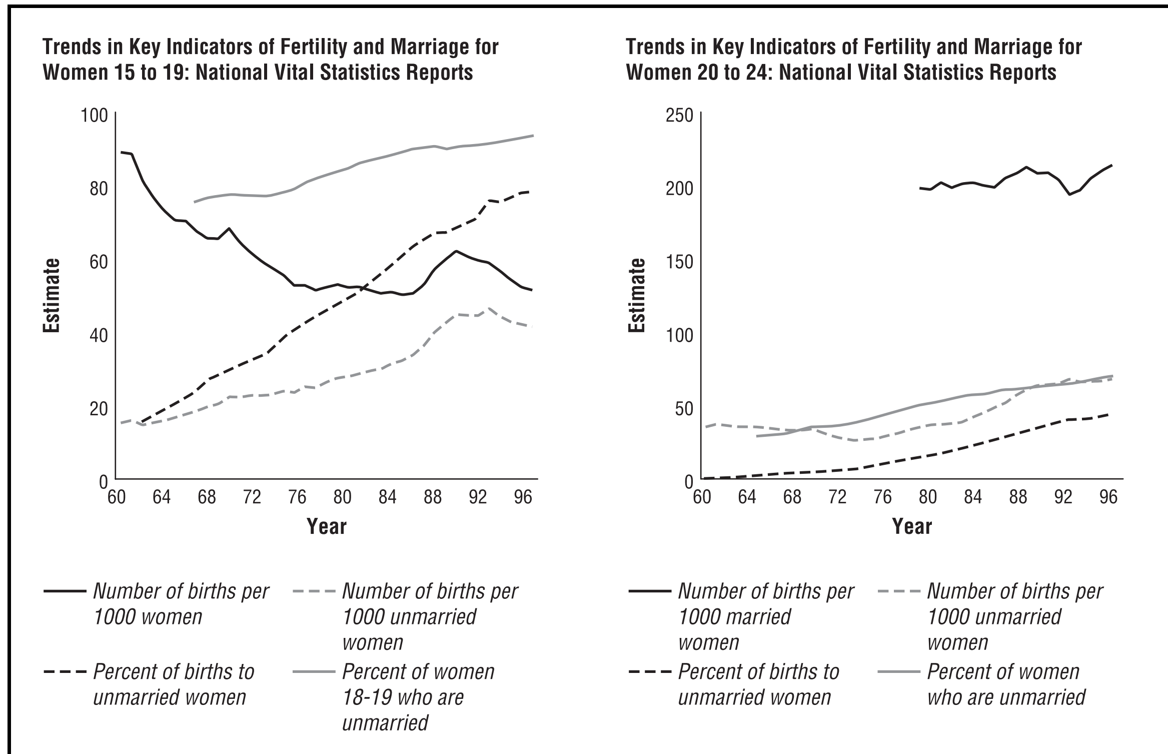
***Megan M. Sweeney***

# TRANSITION TO PARENTHOOD

The transition to parenthood is typically defined as the event of becoming a biological mother or father. Early transitions to parenthood in the United States have been a topic of concern to scholars, policy makers, and the general public since the early 1970s. This concern has been fueled by the growing proportion of young mothers who are single and by the putative consequences of early and single childbearing. For instance, women who have a birth during their teens are more likely than their counterparts who postpone childbearing to drop out of high school or become dependant on welfare. Although early parenthood is a relative concept, considerable attention has been paid to transitions during the teen years (i.e., 15 to 19). Basic trends in adolescent and young adult transitions to parenthood, the causes and consequences of these trends, and directions for future research are discussed here.

## HISTORICAL TRENDS

One of the more noted trends in the transition to parenthood is its postponement. As evidence of this, the proportion of women who have their first child before the age of 25 has decreased since the 1960s, whereas the proportion of women who have their first child beyond the age of 25 has increased. The postponement of childbearing has been concentrated mainly among women with college degrees




***Trends in Key Indicators of Fertility and Marriage.*** CENGAGE LEARNING, GALE.

and reflects increases in their returns to higher education. Delayed childbearing on the part of more educated women has led to a divergence between educational groups in rates of early childbearing. In spite of this divergence, scholars documenting trends in early parenthood have focused mainly on the dramatic increase in the fraction of early births occurring to unmarried women.

Among women of all reproductive ages, changes in the proportion of births to unmarried women, termed the *nonmarital fertility ratio*, have been driven by declines in the proportion of women marrying, increases in nonmarital birthrates, and decreases in marital birthrates. Trends in these statistics, which are presented in Figure 1, are more frequently and fully documented for teen women than for woman of other ages, and they are rarely presented for men. The proportion of births occurring to unmarried teen women increased from 0.148 to 0.785 between 1960 and 1998. During this same period, the proportion of teen women who were unmarried increased from 0.719 to 0.936. Whereas the birthrate for married teen women (calculated as the number of births per 1,000 married women ages 18 to 19) declined from 530.6 to 322.1, the birthrate for unmarried teen women (the number of births per 1,000 unmarried women ages 15 to 19) increased from 15.3 to 41.5. The nonmarital birth ratio for women ages 20 to 24 (presented in Figure 2) also increased considerably between 1960 and 1998 (i.e., from 4.8 to 47.7) but remained considerably lower than the ratio for teen women throughout this time period; the nonmarital birth ratio for teen women increased from 0.148 to 0.785.

Demographers attribute substantially more of the increase in nonmarital fertility ratio to changes in marriage than to changes in fertility. Although pregnancy rates among unmarried women have declined since the 1960s, the proportion of younger women who are single has increased considerably. Delays in marriage have dramatically increased women's exposure to the risk of having a nonmarital pregnancy. Furthermore, women are decreasingly likely to marry in response to a nonmarital conception. Consequently, birthrates among unmarried women have increased over time. Changes in marriage have been more dramatic for Black women than for White women and have driven relatively more of their increase in the nonmarital birth ratio. Changes in the measurement of race and ethnicity make it difficult to document and analyze changes in the nonmarital fertility ratio for Hispanic women.

Although the birthrates for unmarried teen women have increased, birthrates for teen women as a whole have fallen considerably since the 1960s (with some fluctuation over time). For instance, the teen birthrate declined from 89.1 to 51.1 (births per 1,000 women) between 1960 and 1998. Until the early 1990s, Blacks had the highest teen

***Mobile Pregnancy Clinic.*** *Evelyn Flores holds her one-month-old daughter Hailey Interiano after their checkup at the mobile health clinic in Garland, TX. The clinic is just one way of helping teen mothers in Texas, which has the fifth-highest teen pregnancy rate in the nation.* AP IMAGES.

birthrates, followed by Hispanics and then by non-Hispanic Whites. Because of the large decline in teen birthrates among non-Hispanic Blacks during the 1990s, Hispanics have surpassed Blacks in their teen birthrates. As of 2000, rates for non-Hispanic Whites, non-Hispanic Blacks, and Hispanics were 32.6, 79.2, and 87.3 (births per 1,000 women), respectively.

Other developed countries have similarly experienced large declines in teen birthrates since the 1960s. Declining birthrates in developed countries have been attributed to increased education and increased knowledge of contraception and access to it. The decline in birthrates for teens in the United States has been considerably smaller than the decline observed in many other developed countries. Consequently, teen birthrates in the United States are high in comparison to those of Canada and European countries. The relatively higher birthrates among teens in the United States are only partly attributable to their greater socioeconomic disadvantage. Within all socioeconomic groups, U.S. youth tend to have higher teen birthrates than their counterparts from other developed countries. Nor are the higher birthrates on the part of U.S. teens attributable to greater levels of sexual activity. U.S. youth begin having sex around the same age as youth in other developed countries. U.S. youth are said to have higher teen birthrates because of other factors: a weaker consensus that childbearing is only an adult behavior, less accepting attitudes toward teen sex, less access to family planning services, and greater inequality.

A handful of studies have attempted to explain the decline in teen motherhood by examining the relative magnitude of changes in the "proximate determinants" of fertility (i.e., sexual activity, contraception, abortion, and pregnancy). Declines in teen birthrates during the late 1990s have been linked to declines in pregnancy. A small fraction of the decline in pregnancy rates has been attributed to increases in sexual abstinence, but a large share of the decline has been attributed to increases in contraceptive use. Researchers have yet to explain the decline in teen parenthood over a broader time frame.

## PERSPECTIVES

Explanations for the timing of transitions to parenthood are typically informed by rational choice perspectives.

According to these perspectives, individuals weigh the expected rewards of having a child against its anticipated costs (or disadvantages). Because women have historically been the primary caretakers of children and caretaking is time intensive, these perspectives highlight the opportunity costs of having children for women. Child rearing and childbearing interfere with the development of important educational and labor market experiences. In contrast, men have been more responsible for the financial support of children. The transition to fatherhood is likely to impede schooling (at younger ages) and increase men's participation in the labor force.

Studies of early parenthood focus not only on the role of opportunity costs but also on socialization, social control, stress, and risk preferences. Socialization perspectives emphasize the importance of adults and peers as role models for adolescent behavior, whereas social control perspectives highlight the importance of parental monitoring and supervision. Stress perspectives suggest that stresses accompanying major life events are critical to adolescent behavior to the extent that they change parenting practices or reduce an adolescent's sense of control. Deviance perspectives propose that a variety of risk-taking behaviors, including sexual behavior, are linked because of their dependence on a number of factors, including self-esteem, expectations about the future, and peer affiliations.

Studies have drawn on each of these perspectives to explain the influence of various factors on the risk of early motherhood. Although a growing number of studies are examining transitions to early fatherhood, studies typically focus on women because of concerns about men's representation in surveys and the reliability of their reports of fertility. Studies of early parenthood often highlight the role of a single variable or set of variables in measuring the various theoretical constructs. For example, growing up in a single-parent family is thought to be associated with lower levels of monitoring, a greater number of stressful life events, and more exposure to single motherhood.

Several patterns repeatedly emerge in studies of teen motherhood. Reflecting their higher birthrates, Black and Hispanic women are more likely than their White counterparts to become teen mothers; differences by race are explained only partly by family background variables. Women born to a teen mother are more likely to become teen mothers themselves than their counterparts born to an older mother, and women living with a single mother or a stepparent in adolescence are more likely to have a teen birth than their counterparts who live with two biological parents. Women are also more likely to become teen parents if they have parents who are less educated or economically advantaged, or if they themselves have lower academic achievement or aspirations. Women living in more disadvantaged communities (e.g., communities with larger percentages of impoverished families) are at greater risk of teen parenthood, regardless of their own characteristics. Women are more likely to have a teen birth if they reside in states with weaker child support enforcement, but their chances of having a teen birth increase only slightly, if at all, as the level of welfare benefits in their state increases. Yet women growing up in a household receiving Aid to Families with Dependent Children (AFDC) are much more likely to have a teen birth than women whose parents did not receive welfare. Finally, women are more likely to become teen mothers if they experience changes in family structure and income. Studies suggest that the influence of family background factors on teen parenthood does not differ markedly by cohort and is similar in other developed countries (e.g., England).

Rational choice perspectives assume that individuals with greater opportunities for advancement delay fertility in order to avoid incurring early parenthood. These perspectives suggest that the association between disadvantaged family background and the transition to parenthood will weaken or reverse at some point in the life course. Studies that examine how the influence of different variables on the transition to parenthood differs by age offer mixed evidence about if and when this turning point occurs. Some studies suggest that the association between background characteristics and fertility is stronger for teens than for young adults, whereas other studies fail to find any considerable differences.

## CONSEQUENCES

Early childbearing continues to be an issue of public concern not only as a consequence of increases in the nonmarital fertility ratio but also because it is associated with negative outcomes for mothers and children. To consider just a few examples, teen mothers are less likely than their counterparts without an early birth to complete high school and to marry, and the children of teen mothers are less likely than the children of older mothers to receive prenatal care. More recently, scholars have argued that some of the negative outcomes associated with early childbearing are not a consequence of having a teen birth but a reflection of conditions that existed prior to the birth. According to this argument, women whose life chances are more precarious are less motivated to avoid early parenthood in the first place; these women would have had comparable experiences even if they had postponed a birth. Such an argument emphasizes the selection of women with more precarious circumstances into early motherhood, rather than the influence of early motherhood on women. Studies have attempted to identify the causal influence of early childbearing through the use of statistical models (e.g., fixed effects or random effects) that take into account family characteristics that

are not directly measured by researchers and through the use of natural experiments, such as miscarriages, that reveal how women predisposed to early pregnancy fare when they delay childbearing. Taken together, the results of these studies suggest that some but not all of the negative outcomes associated with early childbearing are attributable to selection. Consequently, the experience of being a young mother has some negative influences on women. Researchers also suggest that the specific age at which women transition to parenthood is critical; becoming a teen mother at the age of 15 is more consequential than becoming a teen mother at 19.

## DIRECTIONS FOR FUTURE RESEARCH

Although social scientists' understanding of early childbearing has broadened considerably, several important issues remain to be addressed. Studies of early parenthood and the events that lead to it often fail to consider more than one type of factor, focusing exclusively on the effects of demographic, socioeconomic, or policy variables. For instance, some studies concerning the effects of policies fail to control for socioeconomic factors such as male and female wages. Studies also need to take into account within-group variation by measuring physical attributes such as pubertal development, physical attractiveness, and body size and enduring attributes such as cognitive ability.

Studies also need to consider the family processes by which different factors influence parenthood and its proximate determinants. For instance, studies examining the effects of family structure on such outcomes typically measure mechanisms such as parental monitoring only indirectly. Consequently, it is not clear how family processes mediate family structure, family changes, and the intergenerational association in the timing and circumstances of parenthood. Research is additionally needed on how social-psychological processes (e.g., attitudes) mediate the effects of different factors. Validating opportunity-cost perspectives, qualitative studies reveal that some youth view early parenthood positively because other avenues to success are restricted to them and because they do not expect to live very long. Studies that consider "nothing to lose" attitudes about the future (e.g., expectations about graduating from college or surviving into adulthood) have shown that factors such as neighborhood context influence the transition to parenthood through their influence on expectations about the future. More work in this tradition is needed.

Studies typically examine union dynamics and fertility in isolation, even though pregnancies and births occur within the context of some form of relationship. Studies need to examine how different factors influence the formation of romantic and sexual relationships, in addition to the timing and sequencing of behaviors within these relationships. Related to this, studies need to examine the consistency of influences on the proximate determinants of early births. For example, if a particular welfare policy has no effect on pregnancy and no effect on abortion, then it would be inconsistent to find that it has a significant effect on births. Similarly, if a policy reduces pregnancies and births but has no effect on abortion, then this is evidence that the pathway of influence is through either less sex or more use of contraception. This approach allows researchers to make inferences about the pathways of influence and identify the policy levers most effective in delaying parenthood.

Because previous studies have focused simply on teen or premarital childbearing, it is not clear whether factors associated with having an early birth are also associated with the relationship context of the birth. Statistics based on mothers of all ages reveal that the number of births that occur to cohabiting women is growing and substantial. Changes in the relationship context of teen births beg several questions. Among women who become teen mothers, do factors such as economic disadvantage reduce the chances of having a cohabiting birth, as opposed to a single or marital birth? Do consequences of having an early birth differ by its relationship context? To the extent that children in cohabiting relationships tend to experience subsequent changes in family structure, having a child within a cohabiting relationship may not necessarily be more beneficial than having a child while single.

Information that teen mothers report about fathers on birth certificates suggests that teen fatherhood is much less common than teen motherhood. It is estimated that only about a third of the partners of teen women are teens themselves, and about a fifth of them are 25 or older. Premarital births appear to have important consequences for men, and assessments of the quality of male birth reports conducted in the early 21st century identify aspects of surveys that improve these estimates.

**SEE ALSO** Volume 1: *Family and Household Structure, Childhood and Adolescence; Sexual Activity, Adolescent; Transition to Marriage;* Volume 2: *Birth Control; Childbearing.*

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***Kara Joyner***

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# V–Y

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## VOCATIONAL TRAINING AND EDUCATION

Vocational education, broadly speaking, is a type of course intended to train students for particular jobs. The extent to which an individual student is exposed to such courses can vary greatly, from a student taking a single vocational education course, to whole high schools being organized around vocational preparation. Most often, vocational education courses are intended to prepare students who are unlikely to attend college for the jobs they are likely to obtain. In so doing, vocational education attempts to retain students in high school by providing instruction that ''at-risk'' students see as useful and/or interesting. The rationale is that vocational involvement can benefit students by offering skills that will be of value in local labor markets. Although certainly plausible, certain fundamental questions remain unanswered. Who is placed into vocational education? Is the process relatively neutral, or are certain subgroups more likely to be vocationally steered despite actual achievement and expectation levels? And finally, do these processes play a part in creating labor market inequalities and concentration patterns by class, race, and/or gender?

### THE HISTORY OF VOCATIONAL EDUCATION AND RESULTING STRATIFICATION

Federal funding of vocational education predated more general educational funding by about 40 years and had as its primary intent student preparation for occupational roles through differential socialization. Consequently, class, gender, and racial disparities in occupational status have a history of being reproduced through vocational programs. The recreation of inequality was sometimes implicit, although at other moments was quite explicitly mandated. Congress, for instance, had two goals for vocational training in the 1930s: first, to create programs that reflected the local labor market segmentation in terms of race and gender and, second, to reduce unemployment by matching workers to available blue-collar jobs (Werum, 2002).

As part of this process, federal vocational programs placed top priority on agricultural job training. For example, in 1936, two-thirds of the funding for vocational education targeted the agriculture industry. This

focus provided the greatest benefits to southern agrarian elites who had their workforce trained at the federal government's expense. The marginalization of vocational training available to females resulted from this overemphasis on agriculture, an industry dominated by men. Both the Smith-Hughes Act of 1917 and the George-Ellzey Act of 1934 left underfunded vocational education intended for females by limiting such training to home economics courses. In short, there is a history of highly gendered policies dating back to the beginnings of the vocational education movement (Werum, 2002).

Whereas the history of vocational education consistently demonstrates disadvantages faced by females, the race-related history is mixed. Dating back to the Smith-Hughes Act of 1917, states' rights arguments emphasized state control of education and prevented equitable distribution of resources across racial groups. Such policy once again benefited southern agrarian elites, because states and local school boards had discretion over how federal dollars would be spent. Although Black high schools were finally established in the South, their primary intent was to train workers. For their part, Black southern leaders preferred an emphasis on liberal arts education, yet the available external funding placed serious constraints on the curriculum. Note that race and class divisions also shaped the type of vocational training females received: Whereas middle-class White females were trained to be "household managers," immigrant and Black females were prepared to be "household workers." On a related point, Black males typically trained for "substance" farming, whereas White males were taught "scientific" farming techniques.

Historical cases such as these illustrate the overarching influence of local labor market conditions and elite decision making on racial and gender patterns of participation in vocational education and, consequently, segregation and differential opportunity in local labor markets. Moreover, such cases suggest quite clearly that vocational education may mean very different things to different groups in the stratification hierarchy or, at the very least, may influence social groups in very distinct ways.

For example, in a qualitative study of vocational education students, Royster (2003) argues that getting a job is driven not by qualifications but by who knows about the job openings and who has the "weak ties" that help them secure the position. Despite coming from similar backgrounds and performing similarly in school, Whites in Royster's study experienced far greater occupational success than the Blacks she interviewed. Specifically, Whites earned higher wages and experienced less unemployment than Blacks. Moreover, Black men were more likely to find work outside the trades they trained for in high school. In short, Whites had much more productive social networks beyond school than Blacks. As a result, rather than a meritocratic sorting of workers into jobs, racial inequality was reproduced through the social networks of working-class Whites and their links to the vocational education system.

## BENEFITS, RISKS, AND COSTS OF VOCATIONAL PARTICIPATION

Considering the overall literature on vocational education, results suggest some contradictory patterns. Much of the research suggests that involvement in vocational education reduces the risk of dropping out of high school. Specifying this relationship, Rasinski and Pedlow (1998) argue that the protection from dropping out is generally indirect (working through performance), although the influence of certain types of vocational education (e.g., agricultural) may be more direct. Ainsworth and Roscigno (2005), by contrast, found that students taking large numbers of blue-collar vocational education classes were actually more likely to drop out of high school—a finding that calls into question the central reason vocational education exists.

Beyond high school persistence, other benefits have also been demonstrated. High school vocational education, for instance, has been linked to reductions in teen pregnancy among at-risk teenagers, reduced unemployment after high school, increases in one's earning potential, and the likelihood that one will work in a skilled position. Finally, some work suggests that graduates of vocational education programs are more satisfied with their jobs than are comparable students from other high school programs.

There nonetheless appear to be additional risks, if not costs, of vocational participation. For instance, students in vocational programs do not perform as well in basic academic skills such as mathematics, science, and reading compared to those enrolled in more general academic programs. When it comes to the school-to-work transition, Gamoran (1998) found that academic course work improved students' ability to find a job and enhanced occupational mobility relative to vocational course work. This benefit appears to increase over time. Consistent with this point, Rosenbaum (2001) suggested that most employers are more interested in basic academic skills and trainability rather than specific vocational skills. Along with such costs to occupational mobility, vocational training significantly reduces the chances of attending four-year college and limits opportunities for garnering a professional or managerial position (Ainsworth & Roscigno, 2005; Arum & Shavit, 1995).

***High School Student Welding.*** © BOB ROWAN; PROGRESSIVE IMAGE/CORBIS.

## VOCATIONAL EDUCATION AS TRACKING

By placing students into college preparatory or vocational tracks, schools act to stratify students—a process that differentially prepares some students for college attendance and others for work. This type of tracking could be interpreted as unproblematic, particularly when the channeling it entails is assumed to be based solely on merit. This, however, may not be the reality. Instead, micropolitical evaluation, including the frequent and questionable use of ''neutral'' standardized tests, may act to reproduce inequality at almost every turn. Thus, students from advantaged families (in terms of class, race, and gender) are more likely to be placed in college preparatory tracks.

But how and why might differential tracking of groups occur? As high school students form goals and aspirations, the adults and peers in their lives easily influence them. If teachers and counselors disproportionately encourage certain students (e.g., minorities, the poor, those who have parents with less education) to enroll in vocational courses, these students may come to believe that they are neither suited for nor capable of success in college preparatory courses. Moreover, low-income and minority parents rarely challenge such school-level decision making, including tracking decisions, because they themselves were tracked in a similar manner, because they trust the judgments of educators, or because they are politically disengaged or feel powerless relative to the educational process. Alternatively, middle-class parents are intimately familiar with how the educational system works and often act to place their children in an advantaged position. Such processes play out both individualistically, as a parent successfully negotiates for his or her child's placement into an advanced class, or collectively, as a group of parents may lobby for curricular development in a particular direction. Questions surrounding the sorting of students into vocational courses or tracks is a relatively understudied topic in the vocational education literature and represents a fruitful avenue for future research.

## CONCLUSION

The literature suggests that higher status students avoid taking vocational education classes. Alternatively, disadvantaged students are funneled into vocational education classes, and this involvement increases the likelihood that they will drop out of high school and decreases the

chances they will attend college. In short, vocational education programs promote very real advantages and disadvantages in the schooling process. They shape which students persist into college and the types of jobs available to them in the local labor market following their exit from high school.

Despite the potential for inequality reproduction, some researchers continue to advocate vocational education as the best way to motivate students to behave and work hard in school. The assumption here is that incentives—in this case, incentives for eventual job placement—are necessary to motivate students (Rosenbaum, 2001). To be sure, this viewpoint is consistent with the original purpose of tracking: to encourage students to resign themselves to their appropriate position in society, to garner marketable skills, and to see their placement as just. This viewpoint, however, is based on an assumption of a fair and meritocratic educational sorting process. The literature on vocational education suggests that this assumption is questionable at best.

**SEE ALSO** Volume 1: *Employment, Youth; High School Organization; Racial Inequality in Education; School Tracking; Socioeconomic Inequality in Education;* Volume 3: *Lifelong Learning.*

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***James W. Ainsworth***

## WELFARE REFORM

**SEE** Volume 1: *Policy, Child Well-being.*

## YOUTH CULTURE

The study of youth culture and its formation is diffuse and expansive, charted across a variety of disciplines that include but are not limited to sociology, anthropology, psychology, education, history, literature, and cultural studies. Two central questions have directed the study of youth culture. What are the conditions for the emergence of a mass youth culture? In other words, what forces led to the formation, proliferation, and concentration of youth cultures as they are understood in the early 21st century? How can researchers define and identify a culture or cultures of youth as being distinct from the adult culture or cultures in a particular society?

### DEFINING YOUTH CULTURE

Images of punks, burnouts, mods and rockers, suburban wiggas, goths, cheerleaders, graffiti writers, teenyboppers, skater kids, beats, hippies, zootsuiters, b-boys, DIY kids, lesbian zine-writers, and ravers come to the fore when one thinks about what youth culture is and the groups that constitute it. However, the precise meanings of the terms *youth* and *culture* have been difficult to establish. In response to the ambiguous and historically shifting boundaries that mark age categories—distinct youth cultures are developing earlier in the life course, whereas transitional markers representing adulthood such as marriage increasingly are delayed—and the broad use of the word *culture*, much scholarly discussion has involved matters of definition.

Those who conduct youth studies recognize youth cultures as expressive, emerging in and through a set of shared practices and collective meanings and organized by young people as they navigate a range of material, historical, and ideological forces. In this regard there is both a symbolic basis and a material basis to youth culture. Youth culture constitutes itself as a peer group yet is not homogeneous. An endless proliferation of splintering groups can found among the ranks of contemporary youth. Cultures of youth may be identified in terms of symbolic resources (sneakers, cell phones, iPods, hair extensions, slang, and argot), rituals and practices (car cruising, car racing, body piercing and tattooing, surfing, graffiti writing), and scenes (streets, raves, parking lots, proms, schools, skate parks, arcades).

Generally, scholars agree that youth culture should be regarded as semiautonomous in nature. Youth culture is not something young people create in isolation from the

currents of the mainstream or dominant adult culture of a particular historical moment. Youth culture also is not fully independent of what often is referred to as parent culture, which typically is differentiated from the mainstream by race, ethnicity, and class. For example, the Brown Berets, a cohesive group of working-class Chicano and Chicana students in southern California in the late 1960s, positioned themselves against the White mainstream as they mobilized in support of Chicano studies in universities and improved educational opportunities for Chicano high school students and condemned the oppressive conditions responsible for racial profiling, violence, and poverty in their communities. At the same time they embraced an alternative language of identity from their parents, referring to themselves with proud defiance as Chicano instead of Hispanic. In doing that, they distinguished themselves from the mainstream culture and the parent culture simultaneously (Chávez, 1998).

Many scholars have investigated youth culture as an oppositional culture while recognizing that many of its defining features are not oppositional to the mainstream adult culture or the parent culture. Youth cultures can be part of the mainstream, originating from school-sanctioned activities (e.g., jocks) or being commercially developed (the MTV generation). Youth cultures can be defiant, embracing an ethos of irreverence and abandon, as concern about questions of mobility is suspended temporarily—as in the case of the college panty raids that weakened college administrators' role of being *in loco parentis* in the 1950s—yet also can be squarely mainstream in their orientation to the future.

## CONDITIONS FOR THE EMERGENCE OF YOUTH CULTURE

The changing economic and social reality of childhood and adolescence in North America in the late 1900s set in motion swift changes in the leisure activities of young adults, the spaces they occupied, their activities, and the collective and individual selves they imagined. In the process it created a situation ripe for the emergence of a semiautonomous youth culture. Though a burgeoning youth culture can be traced to the early 1800s with evidence of young groups of men gathering in public settings for festivals and parades, most scholars agree that a mass youth culture emerged in the later part of the 19th century and was firmly a part of the cultural landscape by the mid-20th century.

Most youth historians agree that a confluence of forces combined to form a mass youth culture. In the United States, where a distinct youth culture is most visible, the growing freedom and independence of youth from family life that followed urban and industrial expansion in a modern capitalist nation-state set the stage for increasing school attendance, the emergence of professional psychology, and public campaigns of youth advocacy that together played a role in shaping the boundaries of a mass youth culture.

High levels of age segregation are recognized as a necessary precondition for the emergence of a distinct youth culture. Institutions of mass socialization such as public schools conceived in terms of their potential as a socially integrative force served to cement a society that had been segmented by age. Before the 20th century, few youths attended high school; most worked, often beside adults, in factories and fields. The movement of youth into school meant that young people's lives played out in an institutional setting largely apart from adults, although there is some evidence of distinct youth cultures having taken shape through work before the mass ushering of youth into school. One example is the newsies, indigent boys in their early adolescence who sold newspapers on the streets of New York City, often lived in shared housing, and collectively organized for improved work conditions in the late 1800s.

The character and place of a semiautonomous youth culture was the subject of concern among educators, parents, and social reformers for most of the twentieth century. Youths' growing diversity with the mass influx of immigrants in the late 1800s and the shifting place of young people in a rapidly changing social landscape in the early 1900s fueled anxieties among a generation for whom the ability to supervise all aspects of young people's cultural life was increasingly beyond their grasp, giving rise to moral panics and widespread worry about youth deviance and delinquency.

Changes in the way young people had been culturally identified and constructed as a distinct age group also played a significant role in the formation of a mass youth culture. Beginning in the mid-nineteenth century, young people began to be seen by scholars for the first time as a cohort with distinctive habits and traits. By the 1930s the idea that adolescence is a distinct stage in the life course was entrenched in both the American cultural imagination and scholarly literature. At the threshold of adulthood, adolescence increasingly was treated as a tumultuous stage in the life course, a period of uncertainty and angst over the status and stability of the self. That characterization was influenced by the popularity of professional psychology, with its growing concern for adolescents' "normal" moral and psychological development and departures from that norm. The preoccupation with normal development, combined with widespread worry about youth delinquency and the fact that young adults' lives increasingly were dedicated to activities outside the home, led to concerted efforts to socialize young

people inside and outside school, paving the way for the development of a mass youth culture (Palladino, 1996).

A variety of organized nonschool activities for youths sprang up to ensure their development as morally sound citizens and guard against youth complacency and delinquency, such as President Franklin Delano Roosevelt's youth workers' program. By the mid-20th century, teen canteens, school dances, and sock hops were a mainstay of cultural life for young adults, although race, religion, class, and sex played an influential role in participation in those activities. William Graebner (1990) showed how the sock hop was an event largely attended by White middle-class girls and was intended to protect that group of teenagers from activities organized within working-class, Black, and male youth cultures. Its conservative undertones, especially the selection of music played, kept many young people whose musical tastes were rooted in the emerging youth subcultures and not in the adult-sanctioned youth culture away.

School-sanctioned activities such as proms, student government, and after-school sports in the post–World War II period were also central to an evolving mass youth culture. Shaped by an uneasy cold war climate at home, school-based activities, much like school itself, were organized to create a more cohesive, assimilated, and homogeneous youth cohort. Willingness to participate in mainstream youth cultural activities reflected one's patriotic duty and democratic commitment and also was seen as an expression of essential teenhood by the 1950s.

The expansion of a middle class, its growing prosperity after World War II, rapid suburbanization, and rising consumerism also helped transform the leisure lives of young people and establish a mass youth culture. The growing presence of a consumer market radically transformed the leisure activities of youth as teens, a group that for the first time had disposable income (their incomes were less likely to be directed to family needs and allowance became more common) and thus emerged as a distinct consumer category (Palladino, 1996). The leisure of young adults was reinvented radically around consumption as entire markets developed to produce and sell distinct teen commodities (Palladino, 1996), distinguishing this age group from others.

## THE PROLIFERATION OF CONTEMPORARY YOUTH CULTURES

Since the mid-1940s, leisure and consumption have been central means by which young adults constitute themselves as belonging to distinct cultures, distinguishing themselves not only from other age-based groups but also from one another. The consumer market has played a large role in the expansion of a mass youth culture and the proliferation and splintering of contemporary youth cultures. The consumer market has been a powerful force in organizing the social spaces and social activities of young people, appropriating signs and symbols that already register as repositories for youth culture and style. However, much research on youth culture, rather than seeing that culture as flowing from the market, has recognized that youth cultural groups use the objects offered by a consumer market for their own ends: to construct identities, express in-group solidarity, and define themselves apart from adults and other youth groups. For instance, Sarah Thornton (1996), in an investigation of ravers (those who participate in an underground dance scene emerging in the early 1990s, held in empty warehouses as an alternative to dance clubs), demonstrated how youth develop subcultural distinctions and symbolic boundaries to distinguish the hip from the unhip mainstream within club culture.

The focus on the creative means by which youth used objects and forms available through the mass market may be the legacy of the Centre for Contemporary Cultural Studies (CCCS) of Birmingham and its abiding interest in symbolic resistance by youth, especially young working-class men. CCCS scholars in the 1970s and 1980s attempted to understand the formation of oppositional youth cultures and subcultural styles as expressions of marginalized young people's oppressive structural location and the moral panics that developed around them (Hall & Jefferson, 1976; Hebdige, 1979). Blending ethnography and semiotics (a type of analysis concerned with understanding systems of signs and meanings) to reveal the contested nature of youth cultures, scholarly attention was given to young people's use of resources provided by a consumer market to establish subcultural boundaries and respond to the mainstream. Dick Hebdige's 1979 study of the mods, who used discarded market goods (clothes, records, clubs, hairstyles) as identity markers to craft an alternative youth culture that was defined against other youth cultures belonging to the mainstream, is an important example.

## CURRENT AND FUTURE DIRECTIONS FOR RESEARCH

Although a great deal of research on the formation of oppositional youth cultures has focused primarily on rituals of resistance formed through consumption, a much smaller group of youth scholars has focused on the ways in which collective forms of transformative social action have emerged within youth culture. Musical and (maga)zine-based movements such as the Riot Grrrls have served as important conduits for girls to resist commodification, forge an alternative gender and sexual

order, and articulate a feminist political agenda. Cultural jammers—young activists who protest the corporate control of everyday life—have been successful in disrupting the flow of information to the mass audience.

Far greater attention has been paid to the dynamic ways in which race, disability, ethnicity, sexuality, and gender have intersected in the formation of youth cultural groups in the last decades of the 20th century and the first decade of the 21st. Early youth cultural research focused almost exclusively on male youth cultures but with little attention to gender. The British scholar Angela McRobbie (1991) demonstrated that teenyboppers, who are by definition girls, consumed images of teen idols, courting them in the private space of their bedrooms, where the negotiation of feminine sexuality was a little less uncomfortable because girls were unlikely to have an audience there. In 2006 Amy Best examined how young Asian men struggle to assert their place as men among men and forge a pan-Asian identity in the underground import racing scenes in California against efforts by young men aligned with American muscle cars to discredit them as feminine.

Researchers increasingly have acknowledged that the boundaries of contemporary youth culture occur within a social landscape that has been transformed by globalization, the acceleration of production and consumption in late capitalism, the hypermobility of communication systems, and increasingly sophisticated media. The explosion of the Internet and people's movement into a digital age as "citizen consumers," the expansion of global markets, and the proliferation of global and corporate mediascapes have influenced the complex and historically distinct formations recognized as contemporary youth cultures. Technologies have reordered the social organization, expressive forms, and in-group communication that help constitute distinct youth cultures. Those cultures play out in a virtual world where elaborate cyber networks are forged and new publics are conceived. Important examples include the social utility Facebook and the blogs and online forums dedicated to topics and issues that are resonant with members of youth cultures. This direction is likely to be pursued in future research.

An increasingly global economy and the steady stream of people, cultural ideas, and cultural objects across ever-shifting borders has produced many changes in American youth cultures, impelling scholars of youth studies to examine the formation of youth cultures in a global context. As commercial forms of European and American youth culture from MTV to *Beverly Hills 90210* have been transmitted along global mediascapes, distinct and often hybridized youth cultures have emerged in settings where young people rarely were seen as a group apart from adults, pointing out the idea that youth cultures are the products of historical and cultural change. Another example can be seen among second-generation American youth of the Indian diaspora who combine traditional forms of Bhangra dance with the sampling elements of American hip-hop to forge a distinct club culture and construct race and gender identities as they negotiate a highly commercial American youth culture on the one hand and the nostalgic constructions of a India frozen in time by the parent culture on the other hand (Maira, 2002). Global considerations are also likely to inform future research. Because the social experiences of being young are thought to influence life outcomes in adulthood, youth cultural participation is quite relevant to the narratives that prevail as scholars try to make sense of the life course and understand different life trajectories.

**SEE ALSO** Volume 1: *College Culture; Dating and Romantic Relationships, Childhood and Adolescence; Friendship, Childhood and Adolescence; Identity Development; Interpretive Theory; Media and Technology Use, Childhood and Adolescence; Media Effects; Peer Groups and Crowds; School Culture; Social Development.*

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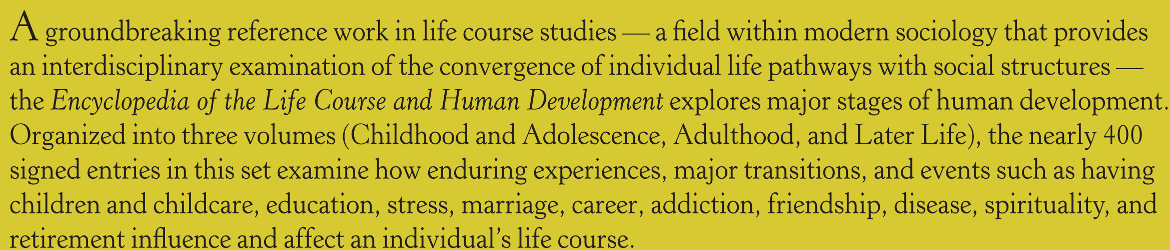
*Amy L. Best*



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# *Encyclopedia of the* LIFE COURSE and HUMAN DEVELOPMENT

Volume 2: Adulthood

DEBORAH CARR Editor in Chief

*Encyclopedia of the Life Course and Human Development*

# *Encyclopedia of the Life Course and Human Development*

VOLUME 2

## ADULTHOOD


***Deborah Carr***

EDITOR IN CHIEF



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**Encyclopedia of the Life Course and Human Development**

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# *Introduction to Volume 2, Adulthood*

What was the moment when you felt that you were really an "adult"? This is a question that I ask students each year, when I teach my graduate seminar Sociology of the Life Course. Without fail, about two-thirds of the fifteen or so students in my class sheepishly respond, "I don't think I'm an adult yet." Each student—most of whom are in their early or mid-20s—then shares the reasons why they feel they're not quite an adult. "I don't own a home." "I'm still in school and don't really have a job." "I live with my boyfriend, but we're not married yet." "I don't have kids." "My parents still pay for my rent and car insurance."

This exercise reveals just how fuzzy the concept of adulthood is; while age 25 would clearly make one a legal adult, few 25-year-olds "feel" adult today. The life stage of adulthood encompasses three distinct and only partially overlapping components: legal, biological, and social. Consistent with this three-prong conceptualization, dictionary definitions of "adult" include: one who has attained maturity; one who is of legal age; and a fully grown, mature organism. Yet these three transitions rarely occur in tandem, thus contributing to the blurry boundaries demarcating adolescence, adulthood, and old age. For example, according to United States law, one becomes a legal adult at age 18. The biological transition to adulthood typically occurs around age 13, when girls and boys reach puberty. The social transition to adulthood is far less clear-cut, although it is typically conceptualized as the age at which one makes transitions into important social roles such as worker, spouse and parent.

Most Americans agree that a particular cluster of social roles signifies the entry to adulthood. Data from the 2002 General Social Survey (GSS), a large national survey of the United States population, revealed that 96% of Americans say financial independence and full-time work are the defining accomplishments of "adult" life, while 94% believe a young person isn't officially an adult until he or she is able to support a family. Yet national data also show that a surprisingly small proportion of young people have actually made such transitions even as late as age 30. The Census Bureau recently calculated the proportion of Americans who have accomplished all of the following transitions by age 30: left their parents' home, finished school, got married, had a child, and achieved financial independence. In the year 2000, just 46% of women and 31% of men had reached all five milestones. In 1960, by contrast, 77% of women and 65% of men had done so (Furstenberg, Kennedy, McLoyd, Rumbaut, & Settersten, 2004).

The entries in this volume provide answers to questions like what is adulthood, and how has adulthood changed over time. Just as importantly, though, the entries in this volume

show persuasively that there is not a universal conceptualization or experience of "adulthood." Adulthood comprises a series of distinctive stages, including early adulthood and midlife. The ways that individuals experience adulthood also vary widely by birth cohort, gender, social class, race, ethnicity, immigrant status, sexual orientation, and geographic region. Finally, one's experiences in adulthood are molded by early life experiences like one's family background, childhood physical and mental health, and educational attainment. One's adult experiences, in turn, set the stage for one's well-being in later life. The life course framework enables scholars to study adulthood using this critically important *whole lives* perspective.

## THE STAGES OF ADULTHOOD

Adulthood encompasses the age range of 18 to 64. Persons under age 18 are classified as youths, while the years of 65 and above are typically referred to as later life or old age. In 2000, persons ages 18–64 accounted for 62% of the 281.4 million Americans, while the 0–18 and 65+ populations accounted for 26 and 12% of all Americans, respectively (U.S. Census Bureau, 2001). While demographers define adulthood in terms of chronological age alone, the age range of 18–64 is incredibly broad and encompasses (at least) two distinctive adult stages: young adulthood, and midlife.

Young adulthood is typically conceptualized as ages 18–35, while midlife is typically conceptualized as ages 35–64. However, these boundaries are imprecise and are widely debated. Biologists often define life course stages using *physiological markers*. The transition to young adulthood, in this view, would be marked by puberty, or the point when children's bodies mature physically and are able to reproduce. The transition to midlife, by the same token, is defined in terms of the loss of or declines in reproductive capacity. According to this perspective, the "midlife" stage is demarcated by the transition to menopause for women and andropause or "male menopause" for men. Upon menopause, a woman is no longer physically capable of bearing children, while andropause is a time when men's physical vigor and virility starts to fade (although the very existence of andropause is hotly debated, as the encyclopedia entry reveals).

Other perspectives emphasize *psychological maturation* as the criteria for defining adult stages. Erik Erikson's (1950) classic model of adult development proposes that the transition between life course stages is contingent upon the successful and sequential resolution of a series of "crises." Young adults, defined by Erikson as persons ages 19 to 34, must resolve the crisis of intimacy versus isolation. Intimacy refers to one's ability to relate to another human being on a deep personal level. Before forming a committed romantic relationship or enduring friendship, however, one must develop a sense of their own identity. Young people who fail to achieve an intimate relationship with others are at risk of social and emotional isolation. The distinctive challenge of midlife (defined by Erikson as ages 40–65) is to resolve the conflict between generativity versus stagnation. A midlife adult is expected to avoid the lure of self-absorption and to instead become generative—working to preserve values and opportunities that will benefit succeeding generations.

A complementary perspective holds that an individual must accomplish a set of age-defined developmental tasks in order to make the successful progression through adult life course stages. Robert Havighurst (1971) wrote that the developmental tasks or prerequisites for successful maturation of young adults (defined as ages 18–30) included selecting a mate, learning to live with a partner, bearing and raising children, managing one's home, starting a career, taking on civic responsibilities, and establishing a circle of friends, acquaintances or coworkers. Midlife adults, defined by Havighurst as persons ages 30–60, were expected to raise their teenage children to become responsible and happy adults, to assume social and civic responsibility, to achieve and maintain satisfactory performance in one's career, to participate in rewarding leisure time activities, to develop a strong and understanding relationship with one's spouse, to accept and adjust to the physiological changes of middle age, and to adjust to the challenges experienced by one's aging parents.

Both Erikson and Havighurst proposed stage theories, which are based on the presumption that successful adult development requires the sequential completion of a series of tasks or challenges. Yet life course scholars argue that stage theories do not allow for individual-level innovation nor do they reflect the fact that social and historical context can affect whether, when, and in what order one experiences important role transitions, like marriage, childbearing, and first job. Thus, while life course scholars agree that adulthood should be defined in terms of the social roles one holds rather than one's chronological age, they grant more latitude in how and when adults experiences the stages of young adulthood and midlife.

## A LIFE COURSE LENS ON ADULTHOOD: ATTENTION TO DIVERSITY

Life course scholars typically conceptualize life course stages in terms of social roles, as Havighurst did, yet they do not tightly tie their definitions of "adulthood" to chronological age (Riley, Johnson, and Foner, 1972). Rather, they recognize that individual lives reflect the intersection of *biography and history*. As such, the ages at which one achieves particular social roles and statuses—and thus the timing of the transition to both young adulthood and midlife—vary widely across birth cohorts. As noted earlier, in the year 2000, just 46% of women and 31% of men had reached the five milestones believed to define "adulthood." In 1960, by contrast, 77% of women and 65% of men had done so (Furstenberg, Kennedy, McLoyd, Rumbaut, & Settersten, 2004).

Does this mean that younger cohorts of adults, those born in the 1960s, 1970s, and later are less mature than their parents or grandparents? Life course scholars believe the answer is "no." Rather, macrosocial factors including economic restructuring, educational expansion, the advent of effective birth control, and even the recent housing crisis have all contributed to what scholars call the "delayed transition to adulthood." Economic restructuring means that agricultural and manufacturing jobs have disappeared, and have given way to the expansion of the service economy; white-collar and professional jobs require bachelor's and master's degrees, so young people need to remain in school through their 20s and even 30s. Nonmarital cohabitation has become an increasingly acceptable living arrangement, so many young people cohabit with their romantic partner for years before officially tying the knot. The development of effective birth control means that young people can protect themselves against unwanted pregnancy—and the shot-gun, youthful marriages often triggered by such pregnancies. Skyrocketing housing costs mean that many young people can't afford to purchase their own homes, and often must share housing costs with roommates.

It's not just the transition to adulthood that has been delayed in recent years. The transition to midlife also has been delayed, at least if Havighurst's definition of midlife is used as criteria. One reason why the timing of the transition to midlife has been postponed is because this transition is tightly tied to the timing of young adulthood transitions. This pattern reflects the life course theme that the *timing of life events matters* for future transitions and trajectories. For example, life transitions typically viewed as the hallmark of midlife—such as achieving stability in one's career, and launching one's children into adulthood—are happening in one's 50s today, rather than one's 20s. As young people receive more education and enter the job market at later ages, they often do not reach their career peak until their 50s or later. Similarly, parents who have their first child while in their mid 30s do not reach the "empty nest" phase until at least their early 50s, when their 18-year-old child leaves for college. Yet some parents never achieve the empty nest phase, as their children remain in the family home because they cannot afford a place of their own.

Whether, when, and in what order adults experience important life course transitions also varies by social class, race, gender, cultural and geographic context, and immigrant status. For instance, young people from disadvantaged economic backgrounds often cannot afford college, and thus enter into full-time blue-collar or clerical occupations when they are in their late teens. They tend to marry earlier, and have children earlier. As such, they may experience the "empty nest" transition while in their late 30s, while their contemporaries who attended graduate school may be taking care of their newborn babies at that same age.

Social class also affects the timing of midlife and later life transitions. Persons living in economically depressed environments often experience the premature onset of health problems like high blood pressure, heart disease, and diabetes. These health conditions, in turn, can trigger an early transition to retirement or a disability-related departure from the paid work force.

Race also has a powerful effect on the transition to adulthood. Black women are far less likely than their White counterparts to ever marry, and also are more likely to bypass marriage en route to childbearing. For example, while 27% of White women ages 15 and over have never married, this figure is 42% for Black women. Nearly two-thirds of all births to Black women occur out of wedlock, while roughly 35% of White births are nonmarital. However, the meaning of "out of wedlock" birth has changed drastically in recent years, as roughly half of these babies are born to cohabiting couples (Mincieli, Manlove, McGarrett, Moore, & Ryan, 2007). An examination of racial differences in family transitions reveals the life course theme that individuals have *agency and guide their own life course*, within economic and structural constraints. Qualitative research by the sociologists Kathryn Edin and Maria Kefalas shows that young Black women in poor urban neighborhoods recognize that they have very low chances of marrying, and that they intentionally have children at young ages, and out of wedlock—as a way to bring meaning and family relationships into their lives.

## ADULTHOOD: THE BRIDGE BETWEEN CHILDHOOD AND LATER LIFE

Although the encyclopedia comprises the three freestanding volumes on childhood/adolescence, adulthood, and later life these three life course stages cannot be understood in isolation from one another. Childhood economic resources, parent-child relationships, the quality of one's schooling, and one's early physical and mental health set the stage for one's adult accomplishments. The broad range of experiences one has in adulthood—attending college, starting a first job, marrying and having children, progressing in one's career (or making major career changes), participating in social and religious activities, maintaining one's health, one's spending patterns, whether or not one relocates their home, and whether one is either a victim of or perpetrator of crime—all reflect, in part, the experiences one had during the formative years. For example, the life course theme of *linked lives* proposes that the fortunes of generations are closely linked. Children often go on to replicate their parents' experiences—either because they have been socialized to hold values and attitudes similar to their parents, or because they and their parents share the social characteristics—like social class or race—that provide either opportunities or constraints as one negotiates adult roles and transitions.

One's adulthood experiences also set the stage for whether one's later life years are marked by poverty, physical disability, cognitive decline, and social isolation—or financial stability, physical vigor, mental acuity, and social engagement. For example, the type of jobs one holds in adulthood may have long-term implications for late-life physical health and cognitive functioning. Physically grueling jobs, fast-paced jobs that place high demands on their workers yet offer them little control over their schedules, and part-time or seasonal jobs that do not offer health benefits all carry potential harmful consequences for health in later life. Interpersonal relationships and community activities also set the stage for successful or problematic aging; friendships, hobbies, family relationships, religion, and workplace relationships all protect against both physical and mental health declines in the long term.

Although the three life course stages are closely intertwined, and each sets the foundation for the successive stages, life course scholars argue strongly that the influences of early life events on adulthood are neither deterministic nor mechanistic. Rather, life course scholars are interested in documenting patterns of both *stability and change*. Resilience is an important theme in life course research, and the encyclopedia entries document those factors that can "undo" or reverse the effects of a particular adversity or resource that one had early in life. For instance, while social class is a strong determinant of college graduation, the strength of this relationship has varied throughout history. Young women from middle class homes

during the 1950s and 1960s often attended, but did not graduate, college because strong normative pressures during that time period encouraged early marriage (Goldin, 1990). African Americans, especially those from poor homes, had little chance of attending college during the early half of the 20th century, yet historical changes like the 1960s Civil Rights movement, public policy shifts like the establishment (yet ultimate weakening) of affirmative action programs, and normative shifts, where school teachers and guidance counselors offer encouragement to students of color, have contributed to the steady increase in the number of African Americans who earned bachelor's degrees in the late 20th and early 21st century. Although Blacks' rates of college attendance and graduation still lag far behind Whites, this gap—especially for women—has diminished over the past century (Hacker, 1992).

Taken together, the entries in this volume provide an exciting and thought-provoking glimpse in adulthood. We hope readers come away with an appreciation of the diverse ways that adulthood is experienced in both the United States and throughout the world. The life course lens reveals the ways that adults construct their own lives, yet the influences of time, place, and culture are inescapable.

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# A

## ABORTION

Induced abortion (henceforth referred to as abortion) is the voluntary termination of a pregnancy by removing an embryo or fetus from a woman's uterus. Abortion can be performed by either surgical or medical methods. In a surgical abortion, a woman undergoes a procedure called manual or vacuum aspiration that is performed by a trained physician. A medical abortion (or non-surgical abortion) is done early in pregnancy (through 9 weeks gestation) through use of a drug or combination of drugs that first causes the termination of the pregnancy and then causes the contents of the uterus to be expelled out of the body. In the United States, the drugs used for medical abortion (i.e., mifepristone, methotrexate, and misoprostol) must be prescribed by a registered physician. Although a woman usually experiences the actual termination of the pregnancy at home, a follow-up visit to a physician approximately 1 to 2 weeks after taking the medication is required to ensure that the abortion was complete.

It is estimated that over one-third of women in the United States has an abortion in their reproductive lifetime, making it a common life event and an important topic of study because abortion affects the lives of thousands of women each year. The decision to terminate a pregnancy or carry it to term has a significant impact on a woman's life course, physically, emotionally, and financially, and may influence her successful achievement of life goals.

### BRIEF HISTORY OF ABORTION IN THE UNITED STATES

Abortion was legal (and quite common) when the United States enacted the Constitution in 1776; but by the early 1900s, it was illegal in all states. In 1973, the United States Supreme Court cases of *Roe v. Wade* and *Doe v. Bolton* declared abortion to be a "fundamental right" rooted in a woman's constitutional right to privacy. In the 1980s and 1990s, the Court recognized the state's interest in "potential life," as evidenced in the cases of *Webster v. Reproductive Health Services* (1989) and *Planned Parenthood v. Casey* (1992), and gave individual states the right to regulate abortion as long as it did not put an "undue burden" on the woman. Since that time, states have introduced and passed several abortion laws that regulate and limit whether, when, and under what circumstances a woman may obtain an abortion (Guttmacher Institute, 2008). State-level laws regulating abortion range from mandatory 24-hour waiting periods, which require a woman to wait a full 24 hours between seeking and obtaining an abortion, information and counseling sessions that sometimes present inaccurate medical information, and restrictions or complete bans on state-level Medicaid funding for low-income women seeking an abortion.

Since 1977, the Hyde Amendment prevents any federal-level Medicaid funds from being used to pay for an abortion unless the pregnancy is the result of rape or incest, or if a woman's life is endangered. In practice, individual states are free to use state-based Medicaid funds to cover abortion, although many choose not to do so. Young women under the age of 18 are particularly affected by state-level restrictions, as many states have either parental consent or parental notification laws in place. These laws severely restrict young women's access to abortion, often resulting in later term abortions or forcing young women to have a child before they are emotionally, financially, or physically prepared to do so.

## THE PREVALENCE AND DISTRIBUTION OF ABORTION

Each year, more than 6 million women in the United States—one in every 10 women of reproductive age (between 15 and 44)—become pregnant, and almost half of those pregnancies are unintentional (Finer & Henshaw, 2006). Approximately 48% of unintended pregnancies end in abortion and, as a result, two out of every 100 women aged 15 to 44 have an abortion each year (Finer & Henshaw, 2005). In 2005, 1.21 million pregnancies were terminated by abortion, making abortion one of the most common surgical procedures in the United States (Jones et al., 2008a). The abortion rate, defined as the number of abortions per 1,000 women of reproductive age in a given year, was 19.4 in 2005, which represents a 9% decline over the previous 5 years and was the lowest rate since 1974. The abortion ratio, defined as the number of abortions per 1,000 live births, indicates that 22% of pregnancies (excluding those ending in miscarriages) ended in abortion in 2005 (Jones et al., 2008a). Almost 90% of abortions are performed in the first trimester of pregnancy (i.e., under 12 weeks of gestation) and 6 in 10 abortions are performed within 8 weeks gestation (Strauss et al., 2007). The proportion of abortions performed very early in pregnancy (at 6 weeks or before) increased from 14% in 1992 to 28% in 2004, most likely due to increased access and use of medical abortion, which the U.S. Food and Drug Administration approved for early abortions in 2000. In 2005, medical abortion accounted for 13% of all abortions, an increase from 6% in 2001 (Jones et al., 2008a).

Not all women in the United States are equally likely to obtain an abortion, however. Hispanic and Black women have abortion rates that are 2 and 3 times higher than the rates of White women, respectively (Strauss et al., 2007). The ethnic disparity in abortion rates reflects the fact that Black women and Latinas have higher rates of unintended pregnancy, and that Black women are more likely to resolve an unintended pregnancy through abortion (Guttmacher Institute, 2005). Black and Hispanic women also are at greater risk of poverty than White women, and poverty increases one's likelihood both of having an unintended pregnancy and of resolving the pregnancy through an abortion. Between 1996 and 2000, abortion rates for nearly all subgroups of women fell, yet rates among poor and low-income women increased. Women below the federal poverty level have abortion rates almost 4 times those of higher-income women (Jones et al., 2002).

The likelihood of having an abortion also varies over the life course, reflecting both biological factors (such as one's physical capacity to reproduce) and social factors (such as one's marital and parental statuses). Many people assume unintended pregnancy and abortion are issues confronted by young women or teenagers only, but the majority of women (56%) having abortions are in their 20s, followed by 30- to 34-year-olds (26%), and then 15- to 19-year-olds (16%) (Strauss et al., 2007). Abortion numbers and rates decline with age because fecundity (i.e., the ability to conceive) declines, use of contraceptive sterilization increases, and more women are married—which makes it easier to use contraceptives effectively and to carry an unintended pregnancy to term. Approximately 86% of abortions occur among unmarried women, including both never-married and formerly married women (Strauss et al., 2007). The proportion of unintended pregnancies terminated by abortion ranges from 67% among formerly married women and 57% among never-married women to 27% among currently married women (Finer & Henshaw, 2006). A commonly held myth is that women have abortions before they begin childbearing, but an estimated 6 in 10 women seeking an abortion are already mothers. Approximately half of women seeking an abortion have already had at least one prior abortion (Jones et al., 2002).

When U.S. women having abortions are asked their religious affiliation, 43% say they are Protestant and 27% say they are Catholic (Jones et al, 2002). Statistically speaking, approximately 51% of women between 18 and 44 in the United States identify themselves as Protestant and 28% as Catholics, which means that the abortion rates for these two groups are lower than that of women reporting other religious affiliations (Guttmacher Institute, 2008). Twenty-two percent of women seeking abortions report no religious affiliation and 8% report "other" affiliations, which may include Jews, Muslims, Buddhists, and Mormons, as well as other smaller religious groups (Jones et al, 2002). In the general population, only 16% of women between 18 and 44 report that they have no religious affiliation and 5% report other affiliations indicating that these two groups have abortion rates that are higher than that of Protestant and Catholic women.

Women's reasons for terminating a pregnancy vary, although over 70% of women report doing so out of concern for or responsibility to other people or because they cannot afford a baby at that time (Jones et al., 2008b). Other common reasons are related to an interruption of school or career, not wanting to be a single mother, or having already completed childbearing. These reasons underscore the important role of abortion in a woman's life course. For a young woman, an unwanted or mistimed birth may prevent her from pursuing her educational or career goals. For an older woman, an unwanted or mistimed birth may directly affect her ability to provide for children that she already has.

## SHORT- AND LONG-TERM CONSEQUENCES

Abortion is a very safe surgical procedure when performed by a trained medical professional and under sanitary conditions. The risk of death associated with safe abortion is low and the risk of major complications is less than 1% (Grimes, 2006). The earlier in a pregnancy an abortion is performed, the safer the procedure; when an abortion is performed under 12 weeks gestation, the risk of death is 0.4 per 100,000 abortions, but that number dramatically increases to 8.9 deaths per 100,000 abortions when an abortion is performed at 21 weeks gestation or beyond (Bartlett et al., 2004). Fortunately, fewer than 2% of abortions are performed after 20 weeks gestation. The most common causes of abortion-related death are infection and hemorrhage, accounting for over 50% of deaths (Bartlett et al., 2004). On average, eight women each year die in the United States from induced abortion, compared with about 280 who die from pregnancy and childbirth, excluding abortion and ectopic pregnancy.

Since the early 1980s, researchers have investigated the long-term effects of voluntarily terminating a pregnancy. Most research evidence indicates that abortion is safe and carries little or no risk of fertility-related problems, cancer, or psychiatric disorders (Boonstra et al., 2006). Studies indicate that vacuum aspiration—the method most commonly used during first trimester abortions—poses virtually no long-term risks of future fertility-related problems, such as infertility, ectopic pregnancy, spontaneous abortion, or congenital malformation (Hogue et al., 1999). In 1996, a meta-analysis of several studies suggested that there was a significant positive association between abortion and breast cancer; but since then, several reviews by experts concluded that there is not a statistically significant association. In 2003, the National Institute of Health (NIH) declared that the evidence shows that "induced abortion is not associated with an increase in breast cancer risk."

One of the most contested and controversial abortion-related issues is the association between abortion and women's mental health. Opponents of abortion have claimed that abortion is bad for women's mental health and leads to negative psychological outcomes such as depression and anxiety. In 1987, at the request of President Ronald Reagan (1911–2004), Surgeon General C. Everett Koop (b. 1916) reviewed the evidence linking abortion to negative mental health outcomes and stated that he could not come to a conclusion because of the serious methodological flaws of the studies, but that he perceived psychological problems related to abortion to be "miniscule from a public health perspective" (Koop, 1989). Since that time, numerous studies have attempted to link abortion to a range of conditions, including psychiatric treatment, depression, anxiety, substance abuse, and death (Fergusson et al., 2006). Many studies, however, have serious methodological flaws (e.g., failure to take into account important preexisting psychological conditions and other important life factors) that make it impossible to infer any type of causal relationship (Boonstra et al., 2006).

Several well-designed research studies and reviews have found no significant association between abortion and women's long-term mental health (Bradshaw & Slade, 2003). Some of the most conclusive evidence comes from a large-scale, prospective cohort study of 13,000 women in the United Kingdom, which compared women who terminated a pregnancy to women who carried the pregnancy to term. The findings indicate no difference in the psychiatric outcomes between the two groups of women. (Gilchrist et al., 1995).

Although researchers have not found strong evidence linking abortion and women's long-term mental health, opponents of abortion have successfully created the concept of a "postabortion syndrome," suggesting that women who have abortions suffer from symptoms similar to combat veterans and victims of natural disasters, rape, and child abuse (Speckhard & Rue, 1992). As of 2008, postabortion syndrome is neither supported by empirical evidence, nor is it recognized by the American Psychological Association or the American Psychiatric Association. Nevertheless, many antiabortion researchers (and lay people) continue to attribute negative postabortion emotions to the single act of having an abortion instead of taking into consideration the multitude of factors that may affect a woman's emotional adjustment after an abortion, including social stigma, the unintended pregnancy itself, preexisting mental health conditions, and other life circumstances.

The decision to have an abortion is difficult and complex. It occurs in the often-stressful context of experiencing an unintended pregnancy. Sociological research indicates that perceived social support is directly related to feelings of well-being and may reduce or buffer against adverse consequences of a stressful life event (Major et al., 1990). Perceived social support is defined as information or actions (real or potential) leading individuals to believe that they are cared for, valued, or in a position to receive help when they need it. Several studies have found a positive relationship between perceived social support (from partner, family, and friends) and postabortion well-being; women who perceive their family and friends to be supportive of their decision consistently rate higher on measures of well-being than women who perceive their friends and family to be less than supportive (Major et al., 1997). Perceived social support may be particularly

important for successful adjustment to abortion because of the strong moral sanctions against abortion in U.S. society. Family members' and friends' attitudes about abortion (as well as those of the general public) have the potential to influence a woman's perceptions of stigmatization, which may influence disclosure about abortion and access to social support.

Some women may feel guilt, shame, or embarrassment after having an abortion, but it is not yet understood whether these feelings are rooted in personal conflict about the abortion or in concerns about how others view her decision (i.e., feeling stigmatized by the abortion). The social stigma associated with abortion, much like stigma attached to other moral issues or behaviors, can have distressing consequences. For women, the stigmatization associated with abortion can confuse or delay an already challenging decision-making process, it can cause unnecessary guilt or remorse, and it can lead to feelings of alienation and isolation.

## THE IMPACT OF ABORTION POLICY

Abortion is safe and legal in the United States and it is estimated that one out of every three American women will have at least one abortion in their reproductive lifetime. Despite the legal status and common occurrence, abortion remains extremely politicized with people defining themselves as either pro-choice or pro-life, positions that are often aligned with identifying oneself as a Democrat or Republican. Pro-choice individuals and reproductive rights advocates maintain that women have a fundamental right to decide to carry a pregnancy to term and that the government should not control a woman's right to choose. By contrast, opponents of abortion (often termed *pro-lifers*) usually believe that life begins at conception and that abortion is murder, and thus an immoral and illegal act. Given the controversial nature of abortion, it is sometimes portrayed as a statistically rare and potentially distressing event that requires excessive restrictions and regulations. This depiction can create a hostile environment that fosters judgment and criticism about women who choose to terminate an unwanted pregnancy, and may directly impact the life course of a woman who prefers to terminate an unintended pregnancy but does not have financial, geographic, or social resources to do so.

Having an abortion may also significantly influence a person's life course depending on their own lived experiences. The ability to decide when and how many children to have is crucial to achieving life goals and abortion policies that severely limit whether, when, and under what circumstances a woman may obtain an abortion have the potential to alter a woman or couple's personal, educational, and career goals. Highly restrictive policies that limit access to abortion (geographically and financially) may be particularly injurious to women with the fewest economic resources. Limited access to abortion may force women to carry unintended pregnancies to term, which makes it extremely difficult for women to rise out of poverty and make a better life for themselves and their families.

Conducting rigorous and scientifically objective research on abortion is difficult for several reasons: underreporting of abortion on surveys and questionnaires; stigmatization of the issue that prevents people from talking about it openly; and biased research intended to strengthen arguments in defense of one particular side of the abortion debate. Nonetheless, well-designed abortion research is critical to understanding the role and impact of abortion in women's lives.

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## ABSENT FATHERS

SEE Volume 1: *Child Custody and Support;* Volume 2: *Fatherhood; Noncustodial Parents.*

## ACTIVITY PARTICIPATION, ADULTHOOD

SEE Volume 2: *Leisure and Travel, Adulthood; Time Use, Adulthood; Volunteering, Adulthood.*

## ADOPTION

SEE Volume 2: *Adoptive Parents.*

## ADOPTIVE PARENTS

Adoption is the transfer of parental rights and obligations to a person or persons other than the biological parents of a child. Ancient records, including those from Babylonia and China, show that the practice of adoption has existed in various forms throughout history. It has been utilized for reasons as diverse as ensuring family lineage and inheritance, strengthening political and military alliances, and promoting children's well-being. Although adults are sometimes adopted, the vast majority of adoptions today are of minor children for the purpose of family formation.

### ADOPTIVE FAMILIES

Adoptive parents assume parental rights and responsibilities for a person who is not their biological offspring. In formal adoption, the parental rights of biological parents are legally severed and the courts oversee an official transfer of parental rights to the adoptive parents. Approximately 127,000 children were formally adopted in the United States during 2000–2001. Census 2000, the first U.S. census to collect data specifically on adopted children, found that there are more than 2.1 million adopted children in the United States, more than 1.6 million of whom were under age 18. According to some estimates, 2 to 4% of American families have an adopted child.

Married couples are the largest percentage of adopters, although adoption rates among unmarried couples and single people are increasing. Adoptive parents are generally older and have been married longer than biological parents. Rates of adoption of unrelated children are higher among Whites than African Americans or, particularly, Hispanics. They are also higher among those with higher levels of education and income. Adoptions of children already related to the adoptive parents before the adoption, however, appear to be higher among persons of color and those with lower levels of education and income. The overall rate of adoption among African Americans is historically higher than that of Whites.

The most common form of adoption (more than 40% of all domestic adoptions) is stepparent adoption. Under the law, a stepparent adoption occurs when the partner of one of the child's biological parents legally replaces the other biological parent as the second parent to the child. The most common scenario is when a biological parent remarries, although cohabiting heterosexual or same-sex partners may qualify in some cases.

Single adults, primarily women, are increasingly becoming adoptive parents. Although studies report outcomes among these adoptions that are comparable with two-parent adoptions, single-parent adopters may still encounter a preference for couple adopters among agency staff or biological mothers seeking to place a child for

adoption. One result is that these single adopters may face lengthy waits or end up adopting children who may present particular parenting challenges, such as older, special-needs children. Some single adopters who desire a young child, and who have the financial means to do so, adopt internationally to shorten the wait and increase the likelihood of finding such a child.

Gay and lesbian couples are another kind of adoptive parent. No clear data exist about the number of gay and lesbian adoptive parents, but a small but growing research literature addresses their experiences and family well-being. Evidence suggests these adoptions are as successful in terms of forming well-adjusted, supportive families as adoptive families in general. However, gay and lesbian adoption seekers may still experience resistance by some adoption agency staff, statutory restrictions, or negative public perceptions.

In recent decades, rates of international adoption—that is, adoptions of children born outside the United States—have increased significantly. More than 13% of the adopted children recorded by the 2000 Census were adopted from other countries. The number of immigrant visas issued by the U.S. State Department for international adoptions tripled between 1990 and the mid-2000s. Prior to the 1990s, the majority of international adoptions by U.S. parents were of Asian children, largely from South Korea. By 2008 China, Guatemala, and Russia provided the largest number of children adopted internationally by American parents.

International adoptions have increased in popularity among Americans seeking to adopt infants, to avoid often lengthy waits for children in the United States and to minimize the possibility that birthparents will try to reclaim their child. Age restrictions for adoptive parents vary among countries and may provide more options than some U.S. agencies. Although many countries allow singles to adopt (particularly women), some do not allow same-sex couples to do so. International adoptions can also be expensive relative to domestic adoption, with costs sometimes ranging into the tens of thousands of dollars. In addition to any agency fees and travel costs for the child, adoptive parents may be required to make one or more trips to the country from which their child is being adopted. Children adopted internationally may also have health concerns related to lengthy stays in orphanages, traumas, or illnesses such as HIV/AIDS that add expenses. Whereas most children adopted internationally do well, preadoption experiences such as institutionalization may lead to long-term emotional and behavioral problems or learning deficits. Accordingly, adoptive parents are advised to address potential problems with appropriate pre- and post-adoption support.

## ADOPTIVE PARENTS AND THE FAMILY LIFE COURSE

"Adoption is not a one-time event, but a life-long experience" (Palacios, 2006, p. 496). As such, Palacios adds, researchers and practitioners are increasingly taking a family life-course perspective in addressing adoptive families. The circumstances, composition, and experiences of these families vary widely. Some common themes of research on adoptive parents, however, can be identified.

Researchers have long been interested in the decisions, motivations, and preparations to adopt. Most parents adopt because of their love for children and their desire to parent. For some, the decision to adopt is made only after a diagnosis of infertility or failed attempts to become pregnant using assisted reproductive technologies. Adoptive parents experience the scrutiny of investigations and home studies to establish parental suitability as well as the potentially lengthy wait, financial costs, and uncertainties involved in adoption. Although most adoptive parents successfully overcome the challenges involved, this transitional stage can be a stressful time. From the initial phases of the adoption process onward, social supports are important in ameliorating stressors.

Other research has looked at adoptive parents' experiences and concerns. Adopting older children can be particularly stressful. Not only are these parents faced with the challenges of parenting an adolescent, they may be dealing with the child's history of negative experiences in his or her biological or foster family. The strength of parent–child bonding and attachment is a frequent concern, although rates of serious attachment disorders, such as the inability to form close emotional ties, appear to be low.

Most adoptions are successful; family members adjust well and stay together as a family unit. Post-adoption services may provide continued family supports after an adoption is finalized to help ensure this success. Such services may include support groups, access to case workers, and family therapy. Their availability and range varies widely by such factors as state, agency, provider accessibility, and cost. Additionally, adoptive parents may benefit from counseling throughout the adoption process. Counseling may help parents to deal with preadoption issues such as any emotions evoked by their fertility experience, adjustment to parenthood, dealing with moody teens, or other issues that might arise.

Some adoptions are not successful. Estimates suggest that a small percentage (perhaps 15% or less) of all adoption placements disrupt, meaning that the adoption is never finalized in court. Adoption dissolution, when a child is returned to state custody after a legal adoption, is even more rare. Adoptions of teens or of children who

exhibit psychological or behavioral problems are most likely to disrupt. Case workers and post-adoption services and supports can be especially crucial in helping avoid disruption and dissolution. When adoptive parents divorce, adopted children are legally treated as biological children would be treated; however, some advocates argue that they may experience especially negative emotional impacts in such an event, reasoning that the adoptive children have already "lost" one set of parents (their biological parents), and this may compound feelings of loss and trauma.

## PUBLIC POLICY AND ADOPTIVE PARENTING

Providing homes and post-adoption services for special-needs children have been emphasized in recent research and policy. *Special needs* children are often children in the foster care system who are considered hard to place because of their older age, disability or health issues, race or ethnicity, or wish to stay together with siblings. Research shows that most special-needs adoptions have satisfactory outcomes for both the child and the adoptive parents. However, some adoptive parents of special-needs children will encounter high levels of stress and children's behavioral or educational problems. They may especially benefit from specific support services. Child welfare systems continue to struggle with many policy issues directly related to special-needs adoption to include the provision of adoption subsidies and medical care, legal and process delays in placing children for adoption while they are younger and have spent less time and suffered less potential damage in the foster care system, and recruiting enough adoptive parents (particularly minorities) to meet the needs of children waiting to be adopted.

Although African American families have historically adopted at higher rates than Whites, the high number of African American children in the foster care system overwhelms the number of Black families willing to adopt. Research finds that children adopted interracially generally grow up well adjusted with no racial identity problems. Factors such as the age of the child when adopted and parenting quality have been shown to be more important to outcomes than the racial composition of the family. However, whether African American children should be adopted by White families has been the subject of more than three decades of sometimes contentious debate. In 1972 the National Association of Black Social Workers equated interracial adoption to cultural genocide. Child welfare advocates for the next two decades often supported intraracial placement. It was not until 1997 that federal legislation addressed this issue, prohibiting race from being the sole determining factor in adoption placement.

Recent decades have also seen debate over sharing adoptive familial relationships and information. Depending on the level of "openness" in an adoption, adoptive parents and children may have ongoing contact with the biological parent(s) (*open adoption*), they may share information with the birthparent(s) only through an intermediary such as a social worker (*mediated adoption*), or they may have little or no identifying information about birthparents (*closed adoption*). Closed adoption was widely practiced during the mid-20th century in an effort to protect adopted families from public scrutiny and stigmatization characteristic of the period. Social changes during the 1980s, fed by reduced stigma, growing research on negative effects of secrecy, and activism by birthparents and birth children trying to reunite led to increasingly open adoption practices. By 2000 various types of adoption registries had been established in over half of the states to facilitate the process of adopted children and their birthparents locating each other. Thus, adoptive parents and their children increasingly have access to information about, or a relationship with, the birthparents and can share pertinent information such as health and genetic history.

**SEE ALSO** Volume 1: *Adopted Children; Foster Care; Parent-Child Relationships, Childhood and Adolescence; Transition to Parenthood;* Volume 2: *Parent-Child Relationships, Adulthood.*

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***Kathy Stolley***

# ADULT EDUCATION

**SEE** Volume 2: *Continuing Education.*

# AFFIRMATIVE ACTION, IMPLICATIONS FOR ADULTS

**SEE** Volume 1: *Policy, Education;* Volume 2: *Policy, Employment; Racism/Race Discrimination; Sexism/Sex Discrimination;* Volume 3: *Ageism/Age Discrimination.*

# AGENCY

Agency refers to the human capability to exert influence over one's functioning and the course of events by one's actions. The concept of agency is based on a view of human nature that has changed markedly over time. Early and medieval theological thought placed agentive power in a divine being. Following this, evolutionism relocated agentic power in environmental pressures acting on random gene mutations and reproductive assortment of new combinations of genes. This regulatory process is devoid of deliberate plans or purposes. The symbolic ability to comprehend, predict, and alter the course of events confers considerable functional advantages. The evolutionary emergence of language and cognitive capacities provided the means for supplanting aimless environmental selection with cognitive agency. Human forebears evolved into a conscious agentic species (Bandura, 2008). This advanced symbolizing capacity enabled humans to transcend the dictates of their immediate environment and made them unique in their power to shape their circumstances and life courses. Through cognitive self-guidance, humans can visualize futures that act on the present; construct, evaluate, and modify alternative courses of action to gain valued outcomes; and override environmental influences.

## CORE PROPERTIES OF HUMAN AGENCY

There are several core properties of human agency (Bandura, 2006). One such property is intentionality. People form intentions that include action plans and strategies for realizing them (Bratman, 1999). The second property involves the temporal extension of agency through forethought. This includes more than future-directed plans. People set goals for themselves and foresee likely outcomes of prospective actions to guide and motivate their efforts anticipatorily. When projected over a long-term course on matters of value, a forethoughtful perspective provides direction, coherence, and meaning to one's life.

Self-reactiveness is the third agentic property. Agents are not only planners and forethinkers, they are also self-regulators. Having adopted an intention and action plan, one cannot simply sit back and wait for the appropriate performances to appear. The translation of plans into successful courses of action requires the self-management of thought processes; motivation to stick with chosen courses in the face of difficulties, setbacks, and uncertainties; and emotional states that can undermine self-regulatory efforts.

The fourth agentic property is self-reflection. People are not only agents of action, they are self-examiners of their own functioning. Through functional self-awareness, they reflect on their personal efficacy, the soundness of their thoughts and actions, the meaning of their pursuits, and can make corrective behavioral adjustments, if necessary, to change existing life course patterns (Bandura, 1986). The capability to reflect upon oneself and the adequacy of one's thoughts and actions is the most distinctly human core property of agency.

## MODES OF AGENCY

People exercise their influence through different forms of agency—including personal, proxy, and collective agency (Bandura, 1997). In personal agency exercised individually, people bring their influence to bear on what they can control directly. However, in many spheres of functioning, people do not have direct control over conditions that affect their lives. In such cases, they exercise proxy agency. They do so by influencing others who have the resources, knowledge, and means to act on their behalf to secure the outcomes they desire. For example, children work through parents to get what they want, marital partners through spouses, employees through labor unions, and the general public through their elected officials. However, people often turn to others in areas of functioning where they can exercise direct control but choose not to because they have not developed the competencies to do so, they believe others can do it better, or they do not want to saddle

themselves with the work demands, stressors, and onerous responsibilities that personal control requires.

People do not live their lives in social isolation. Many of the things they seek are achievable only by working together. In the exercise of collective agency, they pool their knowledge, skills, and resources, and act in concert to shape their future. In the collective mode of agency, participants have to achieve a unity of effort for a common cause within diverse self-interests. To do so they have to distribute and coordinate subfunctions across a variety of individuals.

Cultures that are individually oriented tend to favor self-initiative and the exercise of personal agency. Those that are collectively oriented place greater emphasis on group interests and collective forms of agency. However, cultures are internally diverse social systems, not monoliths. Diversity in lifestyles and ways of life demands calls for different forms of agentic practices. The distinctive blend of individual, proxy, and collective agency varies cross-culturally. But everyday functioning requires all three forms of agency to make it through the day wherever one lives.

## SELF-EFFICACY FOUNDATION OF AGENCY

Among the mechanisms of human agency, none is more central or pervasive than beliefs of personal and collective efficacy (Bandura, 1997; Schwarzer, 1992). This core belief is the foundation of human agency. Unless people believe they can produce desired effects and forestall undesired ones by their actions, they have little incentive to act or to persevere in the face of difficulties. Whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to affect changes by one's actions.

Belief in one's efficacy operates through its impact on cognitive, motivational, affective, and decisional processes. People of high efficacy set challenges for themselves and visualize success scenarios that provide positive guides for performance. Those who doubt their efficacy visualize failure scenarios and tend to dwell on things that can go wrong, which undermines performance. A major function of thought is to enable people to predict events and to exercise control over them. People of high efficacy show greater cognitive resourcefulness, strategic flexibility, and effectiveness in managing their environment.

Efficacy beliefs play a central role in the self-regulation of motivation as well. People of high perceived efficacy set motivating goals for themselves, expect their efforts to produce favorable results, and view obstacles as surmountable or as challenges that can be overcome. People's beliefs in their coping efficacy also affect the quality of their emotional life. Those who believe they can manage threats and adversities view them as less inimical, are less distressed by them, and act in ways that reduce their aversiveness, or neutralize them. People have to live with a psychic environment that is largely of their own making. Beliefs about coping efficacy facilitate control over perturbing and dejecting brooding over problems.

People are partly the products of their environments. By choosing their environments and the activities they engage in, people can have a hand in what they become. In self-development through choice processes, destinies are shaped by selection of environments known to cultivate valued potentialities and lifestyles.

## INTERPLAY OF HUMAN AGENCY AND SOCIAL STRUCTURE

Personal agency operates within a broad network of socio-structural influences. These social systems are devised to organize, guide, and regulate human affairs in diverse spheres of life by authorized rules, sanctions, and enabling resources. The development of social systems and the way in which they exercise their influence is not disembodied from the behavior of individuals. People are contributors to their lived environment not just products of it.

Social systems are created and changed by human activity (Elder, 1994; Giddens, 1984), largely through the exercise of collective agency. The authorized rules and practices of social systems, in turn, influence human development and functioning. However, as already noted, in agentic transactions people are contributors to their life conditions, not merely conduits through which socio-structural influences exert their effects. These social influences operate, in large part, through psychological mechanisms. Hence, with the societal rule structures, there is a lot of personal variation in the interpretation, adoption, enforcement, circumvention, and opposition to societal prescriptions and sanctions.

## EXERCISE OF AGENCY OVER THE LIFE COURSE

Different periods of the life course present new types of competency demands for successful functioning (Bandura, 1997). Changes in roles, aspirations, time perspective, and social systems over the course of life affect how people structure, regulate, and evaluate their lives. Infants' exploratory experiences, in which they see themselves produce effects by their actions, provide the initial basis for the development of a sense of agency (Kagan, 1981). Recognition of personal causation is socially enhanced by linking outcomes closely to an infant's actions, by using aids to channel the infant's attention when there is a temporal disconnect between their actions and the outcomes they

are producing, and by heightening the salience and functional value of the outcomes.

There is also a good deal of intentional guidance in fostering young children's agentic capabilities. Parents create highly noticeable proximal effects for their children's actions, segment activities into manageable subskills, and provide their children with objects within their manipulative capabilities that enable them to produce desired outcomes. Through these mastery experiences, young children enlarge their repertoire of basic physical, social, linguistic, and cognitive skills for comprehending and managing the many challenges they encounter daily.

The initial efficacy experiences are centered mainly in the family. But as the growing child's social world expands into the larger community, peers become increasingly important in the formation of a child's sense of efficacy. In the context of peer relations, social comparison comes strongly into play in judging personal efficacy. During the crucial formative period of a child's life, the school functions as the primary agency for the cultivation and social validation of cognitive competencies essential for participating effectively in the larger society. Students' beliefs in their capabilities to regulate their learning activities and to master academic activities affect their academic aspirations, interests, and accomplishments (Pajares & Schunk, 2001).

As adolescents approach the demands of adulthood, they must learn to assume increasing responsibility for themselves in almost every aspect of life. This requires mastering many new skills and the ways of adult society. Learning how to deal with pubertal changes, emotionally invested partnerships, and sexuality becomes a matter of considerable importance. The task of choosing what educational or career paths to pursue also looms large during this period. These are but a few of the areas in which new competencies and self-beliefs of efficacy have to be developed (Pajares & Urdan, 2006). With growing independence during adolescence, some experimentation with risky behavior is not all that uncommon. Adolescents expand and strengthen their sense of efficacy by learning how to deal successfully with potentially troublesome matters in which they are unpracticed as well as with advantageous life conditions.

Adolescence has often been characterized as a period of psychosocial turmoil. While no period of life is ever free of problems, contrary to the stereotype of *storm and stress*, most adolescents negotiate the important transitions of this period without turbulent discord. The ease with which the transition from childhood to the demands of adulthood is made depends on the strength of personal efficacy built up through prior mastery experiences.

In young adulthood people have to learn to cope with many new demands arising from lasting partnerships, marital relationships, parenthood, and occupational careers (Bandura, 1997). Beginning a productive occupational career poses a major transitional challenge in early adulthood. Perceived self-efficacy shapes career paths (Lent, Brown, & Hackett, 1994) and how other evolving demands of young adulthood are managed. By the middle years people settle into established routines that stabilize their sense of personal efficacy in the major areas of functioning. However, the stability is shaky because life conditions do not remain static. Rapid technological and social changes constantly require adaptations calling for reappraisals of agentic capabilities.

The efficacy issues with advanced age center on further self-assessment and misappraisals of personal capabilities. Biological conceptions of aging focus extensively on declining abilities, as many physical capacities do decrease as people grow older. However, psychological functioning follows different trajectories of change for different abilities. Some improve, others remain stable, and still others decline (Baltes & Baltes, 1986). Gains in knowledge, skills, and expertise can compensate for some loss in physical reserve capacity. By its effects on proactive engagement in activities, perceived efficacy contributes to social, physical, and intellectual functioning, as well as to emotional well-being over the adult lifespan.

The course of aging is affected by the societal structures within which it occurs. Older people in the early 21st century are healthier, more knowledgeable and intellectually agile, and more proactively oriented toward life than previous generations. These changes are creating a structural lag in which people are growing older more efficaciously, but in which societal institutions and practices are slow in accommodating their expanded potentials (Riley, Kahn, & Foner, 1994). Hence, some of the declines in functioning with age result from divestment of the social and structural supports for it, as is the case of mandatory retirement and loss of roles that give meaning and purpose to one's life.

## GROWING PRIVACY OF HUMAN AGENCY

The revolutionary advances in communications technology are transforming the nature, speed, reach, and loci of human transactions. These transformative changes are creating greater opportunities for people to more effectively shape the courses their lives take. In the past, for example, students' educational development was dependent on the quality of the schools to which they were assigned. Now they have the best libraries, museums, and multimedia instruction at their fingertips through the global Internet. They can educate themselves independently of time and place. The Internet technology similarly gives people a greater chance to participate in social and political activities in their own way at their

own time. As these examples illustrate, the exercise of agency takes on added importance in this electronic era.

**SEE ALSO** Volume 1: *Bandura, Albert;* Volume 2: *Individuation/Standardization Debate; Social Structure/Social System.;* Volume 3: *Self.*

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***Albert Bandura***

## AGGRESSION, ADULTHOOD

**SEE** Volume 2: *Crime and Victimization, Adulthood; Crime, Criminal Activity in Adulthood; Domestic Violence;* Volume 3: *Elder Abuse and Neglect.*

## AIDS

Acquired immunodeficiency syndrome (AIDS) is a disease found worldwide that afflicts both adults and children, has a high degree of mortality, and affects the well-being of families, communities, and entire nations. AIDS is an infectious disease caused by a virus, human immunodeficiency virus (HIV). The virus destroys a person's immune system, thus allowing opportunistic infections to affect his or her body. HIV is found in semen, blood, and vaginal and cervical secretions, with the highest concentrations found in semen and blood. Unprotected vaginal or anal sex places people at a high risk of contracting HIV. AIDS is a fatal disease, and at present there is no cure or vaccine. Thus control of the global AIDS pandemic relies heavily on prevention education, often a formidable challenge.

The HIV and AIDS pandemic is centered in sub-Saharan Africa where it is devastating the population, killing adults in what should be the prime of their lives, and leaving millions of children—some of whom are infected themselves—without parents. Multiple generations in some families have HIV or AIDS in both developed and developing countries. The pandemic has existed since the early 1980s, and the disease itself, as well as the population changes brought about by AIDS deaths, has widespread implications for public health, human rights, development, and national security. HIV and AIDS have proven to be difficult to control through primary and secondary prevention efforts. Primary prevention aims to prevent uninfected individuals from becoming infected whereas secondary prevention seeks to prevent those already infected from infecting others.

Originally AIDS was not a disease that spanned the life course because of its high mortality. Individuals did not live with and experience the disease over their life course. In the early years of the epidemic, persons with HIV or AIDS would usually live 6 to 12 months at most, which led to a heavy demand for hospice care (Stine, 2004). In the early 21st century, advances in antiretroviral therapy for HIV and AIDS allow persons with access to this therapy to have an improved quality of life and increased life expectancy. In the United States, the average time from infection with HIV to an AIDS diagnosis without treatment is 11 years, and this period is longer with treatment (AVERT, 2008). Because of longer life expectancies and a lower death rate, there is less need for hospice care. Drug therapies allow HIV and AIDS to be managed over the life course in a manner similar to the management of chronic diseases. As a result, the HIV and AIDS population has aged over the course of the epidemic in the United States. As the HIV and AIDS population continues to age, there will be a greater need for long-term care. This pattern is specific to the United States and other developed countries in which there is better access to antiretroviral therapies than in sub-Saharan Africa.

AIDS has a long latency from the time of infection with HIV to the onset of symptoms. New AIDS diagnoses

do not necessarily represent new infections because people may have actually had HIV for years prior to the onset of AIDS symptoms. This long latency has presented challenges for control because infected, asymptomatic persons may unknowingly infect others. It is estimated that about one-fourth of those infected with HIV do not know it (Macfarlane, 2008). Both primary and secondary prevention are important in the global control of HIV and AIDS.

## TRANSMISSION OF HIV AND AIDS

Sexual transmission is the primary means by which people become infected with AIDS throughout the world. Symptoms (which were later retrospectively diagnosed as AIDS) first appeared in gay men in the United States in 1981 (Centers for Disease Control, 1981). From the beginning of the U.S. epidemic, gay men have comprised the largest group of cases. Although homosexual transmission remains the largest route of transmission in the United States, heterosexual transmission has grown over the years. Heterosexual transmission is the more common means of infection in other parts of the world.

Other transmission routes in the United States include infection from sharing drug-injection equipment, contaminated blood products (affecting hemophiliacs and transfusion recipients), contaminated organs (affecting transplant recipients), and needlestick injuries (affecting health care workers). Because blood and blood products have been screened for HIV since 1985, the incidence of cases among hemophiliacs and transfusion recipients is lower compared to the early years of the epidemic.

## SOCIAL PATTERNING OF HIV AND AIDS

From the beginning of the epidemic, the majority of U.S. AIDS cases have been male, although women comprise an increasingly larger percentage of cases from heterosexual transmission (Macfarlane, 2008). Women are more vulnerable to HIV infection than men because there are high concentrations of HIV in semen and women have more mucosal area that is exposed for longer periods of time. Heterosexual transmission is the only category in which female cases exceed male cases. This gender difference has existed since the beginning of the epidemic. There is a close tie between transmission by sharing drug-injection equipment and heterosexual transmission, as many people infected through heterosexual transmission are female sex partners of male drug users. There is also a close tie between heterosexual transmission and perinatal transmission, because most infants with HIV or AIDS are infected by their mothers through perinatal transmission. Many infants perinatally infected with HIV, particularly those with access to antiretroviral therapy, have been able to reach adolescence and adulthood.

| | Adults & children living with HIV | Adults & children newly infected with HIV | Adult prevalence [%] * | Adult & child deaths due to AIDS |
|---|---|---|---|---|
| Sub-Saharan Africa | 24.7 million [21.8 – 27.7 million] | 2.8 million [2.4 – 3.2 million] | 5.9% [5.2% – 6.7%] | 2.1 million [1.8 – 2.4 million] |
| Middle East & North Africa | 460 000 [270 000 – 760 000] | 68 000 [41 000 – 220 000] | 0.2% [0.1% – 0.3%] | 36 000 [20 000 – 60 000] |
| South and South-East Asia | 7.8 million [5.2 – 12.0 million] | 860 000 [550 000 – 2.3 million] | 0.6% [0.4% – 1.0%] | 590 000 [390 000 – 850 000] |
| East Asia | 750 000 [460 000 – 1.2 million] | 100 000 [56 000 – 300 000] | 0.1% [<0.2%] | 43 000 [26 000 – 64 000] |
| Latin America | 1.7 million [1.3 – 2.5 million] | 140 000 [100 000 – 410 000] | 0.5% [0.4% – 1.2%] | 65 000 [51 000 – 84 000] |
| Caribbean | 250 000 [190 000 – 320 000] | 27 000 [20 000 – 41 000] | 1.2% [0.9% – 1.7%] | 19 000 [14 000 – 25 000] |
| Eastern Europe & Central Asia | 1.7 million [1.2 – 2.6 million] | 270 000 [170 000 – 820 000] | 0.9% [0.6% – 1.4%] | 84 000 [58 000 – 120 000] |
| Western & Central Europe | 740 000 [580 000 – 970 000] | 22 000 [18 000 – 33 000] | 0.3% [0.2% – 0.4%] | 12 000 [<15 000] |
| North America | 1.4 million [880 000 – 2.2 million] | 43 000 [34 000 – 65 000] | 0.8% [0.6% – 1.1%] | 18 000 [11 000 – 26 000] |
| Oceania | 81 000 [50 000 – 170 000] | 7100 [3400 – 54 000] | 0.4% [0.2% – 0.9%] | 4000 [2300 – 6600] |
| TOTAL | 39.5 million [34.1 – 47.1 million] | 4.3 million [3.6 – 6.6 million] | 1.0% [0.9% – 1.2%] | 2.9 million [2.5 – 3.5 million] |

* The proportion of adults [15 to 49 years of age] living with HIV in 2006, using 2006 population numbers.
The ranges around the estimates in this table define the boundaries within which the actual numbers lie, based on the best available information.

***Table 1.*** *Regional HIV and AIDS statistics and features, 2006.* CENGAGE LEARNING, GALE.

Worldwide, women account for 50% of total HIV and AIDS cases and 60% of cases in sub-Saharan Africa (Macfarlane, 2008). Female inequality, gender power relations, poverty, and economic dependence on men account for the gender balance in infection. Higher rates of sexually transmitted infections in sub-Saharan Africa also contribute to women's vulnerability. Women in sub-Saharan Africa comprise 75% of total female cases worldwide (Macfarlane, 2008). Incidence of AIDS has increased sharply among women and girls 13 years old and under worldwide. Condoms are a major strategy for the prevention and control of the sexual transmission of HIV and AIDS. However, because of gender power relations, women in sub-Saharan Africa are typically not in a strong position to ask their male partners to use condoms. Similarly, traditional heterosexual socialization that promotes promiscuity as a sign of masculinity interferes with safer sex advice to be monogamous. Men often have multiple sex partners, so a single infected man can infect several female partners. There is also a shortage of eligible male sex partners for women. This gender imbalance places women at great risk for HIV.

## LIFE COURSE PATTERNS

Since AIDS was first identified in 1981, 65 million people have been infected with HIV and 25 million have died worldwide (Macfarlane, 2008). In the early 21st century 36.5 million people are living with HIV and 24.5 million of them (or 64%) are in sub-Saharan Africa, a region that comprises just 10% of the world's population (Macfarlane, 2008). In the United States more than one-half million people diagnosed with AIDS have died. A majority (around 69%) of these individuals did not live to the age of 45 (AVERT, 2008). In 2005 persons ages 25 to 44 accounted for 39% of the AIDS diagnoses and 41% of AIDS deaths in the United States (AVERT, 2008).

Because AIDS has always led to a high degree of premature mortality, it is associated with a high number of years of potential life lost. AIDS has drastically reduced life expectancy in many countries in sub-Saharan Africa, where the majority of HIV and AIDS cases are found. For example, more than one-third of adults in Botswana have HIV or AIDS. Life expectancy there has dropped from 74 before AIDS appeared to 39 in 2008 (Macfarlane, 2008). Projections for life expectancy in 2010 for nations highly affected by AIDS range from 27 in Botswana to 36 in South Africa, Malawi, and Rwanda (Stine, 2004). Botswana and South Africa will experience more deaths than births by 2010, meaning that populations will begin declining.

Worldwide, the majority of HIV and AIDS cases are adults, but children comprise a substantial number. An overwhelming majority of children with HIV or AIDS and children orphaned by AIDS live in sub-Saharan Africa. The number of orphans there who have HIV or AIDS is expected to reach 25 million by 2010 (Macfarlane, 2008). Globally, the number of children living with HIV increased from 1.5 million in 2001 to 2.5 million in 2007 (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2007). Although antiretroviral therapy has been available and has proven to be effective in preventing perinatal transmission in the United States and Europe, women in developing countries have not not had the same access to these therapies.

In terms of both prevention and care, inequality underlies the HIV and AIDS pandemic. Worldwide, HIV and AIDS disproportionately affect uneducated, impoverished, and disenfranchised populations. For example, a disproportionate number of U.S. HIV and AIDS cases are found among African Americans and Latinos (Macfarlane, 2008). Poverty, inequality, discrimination, racism, sexism, heterosexism, and ageism are important factors in the spread of the pandemic. Impoverished populations are consumed with daily survival needs such as food and shelter and, as a result, concern about their own risk for HIV may not be a priority in their lives. Unequal access to HIV or AIDS care and unequal quality of care also contribute to the pandemic's powerful impact

## HIV AND AIDS RISK

About half of all new HIV infections worldwide are among young people aged between 15 and 24, a majority of whom are women (Card, Amarillas, Conner, Akers, Solomon, & DiClemente, 2007). In the United States, among gay men, younger age is strongly correlated with high-risk sexual behavior (i.e., unprotected anal sex). After a notable decline in U.S. HIV and AIDS cases beginning in 1993, cases began to rise again in 1999, particularly among young gay men. This increase was referred to as the *resurgent epidemic* or the *second wave*. Gay men in the current epidemic differ from those in the earlier wave because they did not have the experience of losing members of their peer group to HIV and AIDS, a common experience for gay men during the 1980s. The introduction of effective antiretroviral therapies in the mid-1990s caused some gay men to see the epidemic as less serious. As a consequence, they relapsed into unsafe behavior.

## GENDER AND THE LIFE COURSE

Sociocultural factors play a role in young women's risk. Young women may become dependent on men as a way to achieve independence from their parents. They may become involved in relationships with older men whom they perceive as attractive because of the latter's greater status and wealth. These men, however, also are more sexually experienced and may present a higher risk for

HIV. Girls and young women in developing countries have limited access to education and jobs and may willingly initiate relationships with *sugar daddies*, that is, men who are much older, relatively well-off, and usually married (Card et al., 2007). Some girls may provide sex in order to earn money for school expenses or to help their families. Worldwide, young women's financial vulnerability creates challenges to HIV and AIDS prevention efforts.

In addition to sociocultural factors, physiologic factors play a role in young women's vulnerability to HIV and AIDS. Adolescent women are at heightened risk of HIV infection compared to older women because they have a larger zone of cervical ectopy and their vaginal mucosal lining is thinner. (Cervical ectopy is a condition whereby a small ring of cells extend beyond the normal border of the inner wall of the uterus to the neck of the uterus.) Their immature genital tract can also cause their cervixes to rip or tear during sex, heightening their vulnerability to HIV infection. In addition, vaginal secretions in adolescent women are not fully developed or functional and this physiologic immaturity may play a role in increasing young women's risk for HIV.

Women at the other end of the age spectrum are also vulnerable to HIV infection because of physiologic factors. Women over the age of 45 (perimenopausal women) are at heightened risk because of increased fragility of genital mucosa. In general, all factors, including infectious, traumatic, and hormonal, that impair genital mucosa may increase the risk of HIV transmission. Menopause is associated with a thinning of the vaginal lining and increased vaginal dryness. This can result in small tears and abrasions in the vaginal walls, thereby providing an entryway for HIV.

## CAREGIVING ROLES AND ISSUES

HIV and AIDS raise complex caregiving issues. Although gay men have provided a great deal of informal AIDS care to one another, women also have served important caregiving roles. Mothers and sisters of gay men with HIV or AIDS, as well as infected women with children, have provided care for infected persons during the epidemic. Infected mothers often have to plan for the welfare of their children after their own death. Some of these children also are infected with HIV and thus have special needs. Infected mothers who rely on kinship care usually assign the care of their children to their mothers or sisters (or their children's aunts and grandmothers) (Campbell, 1999). In developed countries when informal or kinship care is not available, children will enter a more formal system of foster care. That system in the United States is already overburdened because of foster care needs of children whose parents are addicted to drugs, incarcerated, or dead.

In regions of sub-Saharan Africa, AIDS has taken such a toll that middle-aged adults are virtually absent in many communities. Older parents of adult children with HIV or AIDS often are caring for grandchildren, some of whom are also infected. In those cases when there are no grandparents to provide care, older siblings often provide care to young ones.

## AGING AND AIDS

Most of the growth in U.S. HIV and AIDS cases among persons over 50 is because of the aging of persons with HIV and AIDS, rather than new infections. The number of mature adults with HIV and AIDS has grown because of the increasing time between infection, diagnosis, and death. Effective antiretroviral therapy is the primary reason for the growing number of people over 50 with HIV or AIDS. However, some growth in HIV and AIDS cases among persons over age 50 is due to people getting infected for the first time.

In the early years of the U.S. epidemic, most new cases among persons over 50 were caused by HIV-contaminated blood transfusions (Stine, 2004). In the early 21st century most cases are the result of sexual transmission. The number of older adults with HIV or AIDS from sexual transmission is expected to increase as the sexually liberated baby boom generation ages. Compared to previous generations, older people are staying healthier longer and are thus able to enjoy extended sex lives. Older adults are also able to remain sexually active because of hormone therapy and erectile dysfunction drugs. The growth in the baby boom population coincides with the growth in use of these drugs, thus creating a new target group for HIV and AIDS prevention strategies. Exposure to public health messages is critical for this population.

Older adults who have been in long-term relationships and who reenter the dating world after divorce or the death of a spouse may not be aware of how their own behavior puts them at risk for HIV. Because they were in a long-term relationship, they may not have been educated about HIV. Older postmenopausal women, no longer fearing pregnancy, may not think to use condoms for protection against sexually transmitted infections (STIs). A survey of sexual practices among older adults found that just 33% of those who were sexually active in the previous three months used condoms (Gorman, 2006).

In addition to older adults' own perceptions, society often views older persons as asexual. Thus older adults have not been targeted with HIV and AIDS prevention as much as younger age groups. The media have not featured stories about older adults with HIV or AIDS in comparison to stories about younger adults. Physicians and other medical providers may not think to discuss risks of HIV, AIDS, or other STIs with older patients as

part of their routine health screening. Nationally, seniors in the United States make up less than 5% of those tested at government funded testing sites (Stine, 2004).

Older adults with HIV and AIDS may experience particular physical and psychological distress. Societal ageism may make the stigma of HIV and AIDS more intense for older adults. Once diagnosed with HIV or AIDS, older adults are less likely than younger age groups to seek out AIDS support groups or other forms of emotional support (Hooyman & Kiyak, 2008). Most of older adults' care comes from friends who also have HIV or AIDS (Shippy, 2007). Older adults with HIV and AIDS are more likely to live alone compared to their younger counterparts, which has important implications for their care (Poindexter & Emlet, 2006). There appears to be a high level of unmet emotional need among older adults with HIV or AIDS.

Although the introduction of antiretroviral therapy in the mid-1990s produced a new optimism, some persons with HIV or AIDS ironically experienced serious side effects more commonly found as age-related conditions in older persons—high blood pressure, heart disease, and diabetes (Stine, 2004). Symptoms of HIV and AIDS are also sometimes confused with the normal effects of aging, because symptoms of HIV and AIDS may mimic those of aging. Some adults may be managing chronic diseases associated with aging, causing them not to recognize symptoms as being associated with HIV or AIDS and to seek treatment. Such symptoms include general aches and pains, headaches, nerve pain, visual problems, chronic cough, lack of energy, loss of appetite and weight, and problems with short-term memory (Hooyman & Kiyak, 2008). Older adults' immune systems are less equipped to combat the effects of HIV, thus allowing the disease to take an accelerated clinical course. The decline in immune system function may explain why the time from infection with HIV to the onset of AIDS is shorter in older adults. In adults over 50, the average time is 5.7 years compared to 7.3 years in people under 50 (Emlet & Farkas, 2002). Older adults are twice as likely as young people to already have developed AIDS by the time that they test positive for HIV (Mugavero, Castellano, Edelman, & Hicks, 2007). Thus early diagnosis in older adults is critical.

## FUTURE RESEARCH DIRECTIONS

Age-associated conditions in an aging HIV population present new research questions, such as whether age-associated conditions appear earlier in older adults with HIV or AIDS. Another research area involves interaction between antiretroviral regimens for HIV and treatments for age-associated conditions, particularly unwanted interaction between the two. There are relatively few studies of how medications for high blood pressure, osteoporosis, and other age-related conditions interact with antiretroviral therapies (Karpiak, 2006). Moreover, clinical AIDS drug trials often exclude older adults precisely because of their age and other health problems. These are among the many challenging research issues in addressing the needs of an aging HIV and AIDS population.

## AIDS POLICY ISSUES

A high priority in HIV and AIDS care policy is to assure that persons with HIV or AIDS in developing countries have the same access to antiretroviral drugs as those in developed countries. HIV and AIDS advocacy and activism will need to be unrelenting in its effort to provide this access.

There also are important policy implications of an aging HIV and AIDS population in developed nations. AIDS service organizations (ASOs) will need to retool and restructure services in order to reduce barriers in service delivery to this population. ASOs will need to increase their knowledge of age-related illnesses and the potential complications due to HIV and AIDS and its treatments. As the HIV population continues to age, more support services and long-term care for older adults with HIV or AIDS will be needed. When informal support systems are exhausted, more formal systems of care will be required to meet the needs of older persons with HIV or AIDS. More coordination between HIV and AIDS services and other services for older adults will be necessary for optimal service utilization.

In addition to HIV and AIDS care, the needs of older adults should be recognized in HIV and AIDS prevention education policy. The visibility of older persons with HIV or AIDS must increase and become a major focus of advocacy and activism. More targeted HIV and AIDS prevention education needs to be provided to sexually active older adults. Safer sex messages should continue to target younger persons at high risk for HIV and AIDS but should expand to include older persons at the other end of the age spectrum.

**SEE ALSO** Volume 2: *Health Differentials/Disparities, Adulthood; Sexual Activity, Adulthood;* Volume 3: *End of Life Decision-Making; Life Expectancy; Mortality.*

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***Carole A. Campbell***

# ALCOHOL USE, ADULTHOOD

**SEE** Volume 2: *Health Behaviors, Adulthood.*

# ANDROPAUSE/MALE MENOPAUSE

Andropause, or male menopause, is a set of physical and emotional symptoms that are presumed to result from age-related declines in testosterone levels. Changing views of andropause over time reflect shifting cultural understandings of masculinity, aging, and sexuality. In the post-Viagra climate, with heightened public awareness of the risk of sexual decline with age, the notion of andropause as a widespread disorder has experienced a surge of scientific, commercial, and public interest (Marshall, 2006, 2007).

## EARLY RESEARCH AND MEDICALIZATION

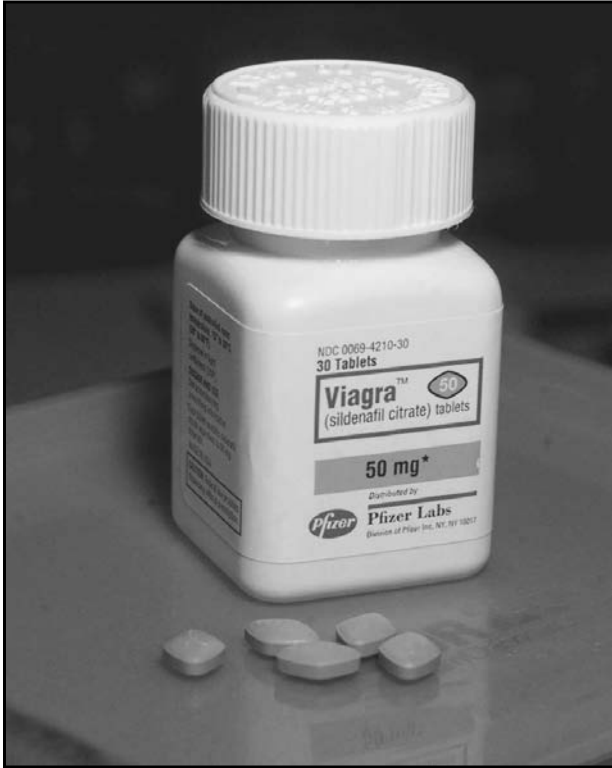
Research investigating the male climacteric and its treatment with testosterone first was reported in American medical journals in the 1930s and 1940s. The male climacteric was seen as clinically significant in only a small proportion of aging men and was attributed to a deficiency in the sex glands. Although sexual dysfunction was viewed as a key symptom of the disorder, it was not the main concern in treatment. Although potency treatment might inadvertently be stimulated by testosterone therapy, it was not to be given for this purpose, and at least one researcher suggested that "it is perhaps better for older men if this phase of the reaction does not result" (Werner 1945, p. 710).

The idea of a hormonally treatable male menopause gained little attention from mainstream medicine in subsequent years. Men's midlife problems were viewed as a period of emotional adjustment, or midlife crisis, not a medical problem (Featherstone & Hepworth, 1985, Hepworth & Featherstone, 1998). Only when sexuality reemerged as the key to men's midlife problems in the late 20th century was male menopause, or andropause, remedicalized, that is, conceptualized once again as a medical condition (Marshall, 2006). Since the late 1990s research journals, especially those which focus on urology and impotence, have featured articles on the diagnosis and treatment of andropause or androgen deficiency in aging males.

## DEBATES

However, there is a significant gap between andropause as a symptom complex and androgen deficiency—or hypogondadism—as a biochemical state. Research on andropause and its treatment with testosterone remains controversial, and there is more disagreement than agreement on the definition, diagnosis, and treatment of this condition. Researchers and clinicians generally agree that many older men report symptoms such as erectile dysfunction, a decline in libido, and a decrease in strength and energy. They also agree that testosterone declines moderately and gradually as men age but that many men remain within the normal range for younger men.

More contentious are issues such as whether declining testosterone levels have medical implications, whether they are caused by confounding factors such as obesity and inactivity, whether testosterone supplements provide clear benefits, and, if so, whether the benefits outweigh the potential risks. Controversies also remain over how to best measure testosterone levels and how to define what normal levels might be (Bhasin, Cunningham, Hayes, Matsumoto, Snyder, Swerdloff, et al., 2006). Data from the Massachusetts Male Aging Study showed that low libido is a poor predictor of low testosterone levels




***Viagra.*** *In the post-Viagra climate, with its heightened public awareness of the risk of sexual decline with aging, the notion of andropause as a widespread disorder has experienced a surge of scientific, commercial and public interest.* AP IMAGES.

(Travison, Morley, Araujo, O'Donnell, & McKinley, 2006). A meta-analysis suggested that the effects of testosterone supplementation on sexual function may be quite modest and may diminish over time (Isidori, Giannetta, Gianfrilli, Greco, Bonifacio, Aversa, et al., 2005). The National Institute of Health concluded that "the growth in testosterone's reputation and increased use... has outpaced the scientific evidence about its potential benefits and risks" (Liverman & Blazer 2004, p. 11).

## A DEBATABLE CONSENSUS

Despite these debates, pharmaceutical companies actively promote an appearance of consensus on the existence, definition, and treatment protocols for clinical entities such as andropause, androgen deficiency in the aging male (ADAM), and symptomatic late-onset hypogonadism. These strategies make use of Web sites, health promotion brochures, articles written or sponsored by pharmaceutical manufacturers that are published in clinical journals, and support to professional and patient groups organized around those disorders. Solvay, the manufacturer of Androgel, a testosterone product, sponsored two studies of primary care physicians' knowledge about andropause (Anderson, Faulkner, Cranor, Briley, Gevirtz, & Roberts, 2002; Pommerville & Zakus, 2006). The studies took as their premise assertions such as "Andropause is a testosterone deficiency that develops gradually over a number of years in all men aged 50 and over" (Anderson, Faulkner, Cranor, Briley, Gevirtz, & Roberts 2002, p. M796) and "The causes, symptoms and treatment options for andropause have been well documented" (Pommerville & Zakus 2006, p. 215) and proceeded to score primary care physicians' responses to questions about the nature of and treatment options for the disorder as correct or incorrect. In light of the lack of scientific consensus on these matters, an exercise of this type should be seen as being in the service of public relations rather than public health.

Mainstream media stories on andropause, usually prompted by press releases from pharmaceutical companies, follow a script suggesting that although the existence of male menopause was a subject of controversy in the past, there is now a scientific consensus that it is a real disorder that is treatable with hormone therapy. Stories of miraculous transformations (weight loss, muscle gain, better sex, better mood, renewed vigor) resulting from testosterone treatment overshadow any mention of possible risks and warnings from skeptical doctors and scientists. In many stories the libido-enhancing benefits of testosterone are added to the already accepted benefits of erectile drugs. Sexual decline and its pharmaceutical reversal are linked clearly with the general restoration of masculine vitality. Not unlike the "feminine forever" message promoted to women by those selling hormone replacement therapy in the 1960s, the newly remedicalized andropause reasserts a hormonal basis for masculinity. Thus, andropause reinvigorates the idea of biologically based lifelong sexual difference (Marshall & Katz, 2006).

Investigators from the Massachusetts Male Aging Study cautioned that viewing normal male aging as a medical problem raises both ethical and public health challenges, especially in the wake of what has been learned about the risks of hormone replacement therapy in women (O'Donnell, Araujo, & McKinley, 2004). It also raises theoretical challenges for those interested in the construction of gender across the life course. Gendered bodies are at the same time sexual bodies and aging bodies. The medicalization of andropause in the late 20th and early 21st centuries illustrates the manner in which such bodies are made and remade at the intersections of science and culture.

SEE ALSO Volume 2: *Menopause; Midlife Crises and Transitions.*

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***Barbara L. Marshall***

# ATTRACTIVENESS, PHYSICAL

Physically attractive individuals exhibit facial and bodily characteristics that most people perceive as beautiful or handsome. Physical attractiveness influences whether a person is liked or loved irrespective of age or stage in the life course. People recall falling in love not only because of similar interests but also because of their partners' looks. According to the social psychologist Susan Sprecher (2006), passionate love—an intense craving for another—is fueled by physical attraction and is especially strong early in a relationship. In a review of many research studies, Alan Feingold (1990) found that men place a slightly higher value on physical attractiveness than women. Yet gender and sexual orientation have only a limited impact on what is desired in a hypothetical sexual partner. Heterosexual men and women, as well as gay men, all reveal that what they desire most in a short-term sexual partner is physical attractiveness. However, the *matching hypothesis*—that people will actually date persons who are similarly attractive to themselves—is also supported, especially over the length of a relationship.

## PHYSICAL ATTRACTIVENESS, EVOLUTION, AND CULTURE

Scholars debate whether physical attractiveness is constant, composed of common elements, or variable over time and place. Based on the Darwinian idea of natural selection, evolutionary theorists believe that attributes thought to signify women's fertility, health, and innocence and men's power and social status are considered attractive across cultures. The psychologist Devendra Singh (2007) noted that what makes women physically attractive includes a low waist-to-hip ratio (e.g., hourglass shape), a combination of childlike (i.e., big eyes, small nose and chin, smooth skin) and sexually mature features (i.e., arched eyebrows, prominent cheekbones), and the overall symmetry of the features. Attractive men display a high waist-to-hip ratio, (i.e., straight torso), dominant features (i.e., prominent cheekbones, large chins) coupled with some "cute" features (i.e., large eyes and small nose), and facial symmetry. Studies in which volunteers rate the attractiveness of a set of faces find composite images (i.e., averaged features of many people) better looking than individual faces, especially when the faces of beauty contestants are averaged. Infants prefer pretty faces, indicated by data showing that they spend more time looking at them. This is important because infants have not yet internalized their cultures' preferences.

In contrast, cultural theorists, such as Lois Banner (1983), argue that physical attractiveness cannot be universal given that standards can and have changed over time. Banner showed that, in the United States, cultural preferences for women's shapes have been quite variable. For example, the ample and buxom "Gibson girl" of the late 1800s made heroic efforts to accentuate a tiny waist (i.e., with tightly laced corsets). Yet in the 1920s the ideal woman was thin, boyish (i.e., flat-chested and straight hips), and clothed in a loose-fitting, light dress. The standard for women in the United States in the early 21st century is a thin and well-muscled habitus that is still buxom. For men, the standards for body shape have varied less than those for women, although the value of muscularity has been variable. The early 21st century standard for men in the United States is trim and toned with discernable musculature.

## COSMETIC SURGERY

Cosmetic surgery is a medical and business enterprise whose purpose is to reshape healthy facial and body parts to approximate cultural ideals more closely. Although the techniques used in cosmetic surgery are similar to those used in reconstructive surgery, the former are considered elective rather than medically necessary. Cosmetic procedures grew dramatically in the latter half of the 20th century. Deborah Sullivan (2001) attributed the huge increase between 1992 and 2002 in the number of procedures performed in the United States to several factors, including advances in medical technology, exposure to mass media that upholds a cultural ideal of youthful beauty, and greater public acceptance of cosmetic surgery. By 2003 cosmetic surgery makeover programs were a popular genre of reality television.

Those who take a positive view of cosmetic surgery emphasize how it can be a form of self-healing and personal empowerment. However, critics argue that cosmetic surgery is a symptom of a shallow, media-driven culture that promotes ageism and sexism (i.e., women make up between 80% and 90% of cosmetic surgery patients). The most common procedure performed in the early 2000s was liposuction (i.e., fat is removed from the abdomen, hips, neck, and other bodily areas). Other common procedures for women include breast augmentation, face lift, and thigh lift and, for men, hair restoration, pectoral implants, and rhinoplasty (i.e., nose job).

### PHYSICAL ATTRACTIVENESS STEREOTYPING AND THE SELF-FULFILLING PROPHECY

Physical attractiveness confers social status because it triggers expectations that attractive individuals will have more advantageous outcomes. For example, attractive individuals are stereotyped as having greater leadership ability, more sociability, better mental health, greater marriageability, and even better intellectual ability than their less attractive counterparts. Sweeping, positive expectations for this range of capacities is known as the halo effect or the "what is beautiful is good" stereotype (see Dion, 1972, p. 285). However, Alice Eagly and colleagues (Eagly, Ashmore, Makhijani, & Longo, 1991) reviewed many research studies and found that attractive people are also perceived as having less integrity, less modesty, poorer parenting abilities, and less concern for others than less attractive individuals. Furthermore, attractive women are sometimes stereotyped as incompetent whereas attractive men are not. Sometimes attractive women are believed to have obtained jobs because of their looks rather than their abilities.

Evidence suggests that attractive people are often treated better than unattractive and, in particular, overweight people (Brownell, Puhl, Schwartz, & Rudd 2005). For example, attractive people tend to obtain better jobs, earn more money, be more popular, and have more dates and sexual experiences than unattractive people. Conversely, attractive people experience less loneliness and social anxiety than unattractive people. Juries are usually more lenient toward attractive defendants—who are more likely to be found innocent and less likely to be sent to jail or made to serve long sentences—than unattractive ones. Yet harsher sentences may be issued if jurors perceive that a woman's beauty was used to commit a crime.

Although plenty of studies discuss the stereotyping of attractive people, there is less evidence that attractive individuals actually meet these expectations, a phenomenon known as a self-fulfilling prophecy. Judith Langlois and colleagues (2000) found that attractive people have excellent social skills. Anne Haas and Stanford Gregory (2005) argued that, because social attention is lavished on attractive children, they probably develop good social skills and enhanced interpersonal power. Negative stereotypes about overweight people (e.g., that they lack will power) tend to lower their self-esteem and increase their social anxiety.

### PHYSICAL ATTRACTIVENESS OVER THE LIFE COURSE

Physical attractiveness has an impact on people's lives over the entire life course. Evidence that infants recognize beauty suggests that the social status conferred by attractiveness is activated early in life, especially when coupled with evidence that mothers pay more attention to attractive infants. Attractive infants are assumed to be more sociable and competent than less attractive infants, and the stereotyping continues into childhood. Dion (1972) found that bad behavior among attractive 7-year-old children was explained by their having a bad day, or what is known as a situational attribution. Conversely, bad behavior on the part of unattractive children was attributed to major dispositional character flaws.

Little girls are socialized to pay attention to their appearance, which becomes a part of their self-concept. These messages come from their parents, teachers, peers, mass media, and toys. In 2008, a popular toy marketed to 4- to 7-year-old girls were Bratz Babies who, much unlike

real infants, wear sexy lingerie and full makeup that accentuates their exaggerated "babyface" features. The dolls also have long highlighted and styled hair, as well as painted finger- and toenails. The only indication that this toy does, indeed, represent a baby is a bottle of milk attached to a thick gold chain around her neck. Feminists believe that a toy that blurs the boundaries between babies and sexually viable women could be harmful. The concern is that girls might internalize the message that their value as women depends on their sexual attractiveness. Toys meant for little boys, on the other hand, draw on popular stereotypes about masculinity. Critics are concerned that representations of "real men" as big, tough, competitive, and warlike could stifle boys' developing nurturing qualities. For example, the popular G.I. Joe action figures have acquired giant muscles in the past 40 years, at the same time that boys have learned that steroids can be used to increase muscle mass.

Appearance takes on still more importance for adolescents and young adults. These are stages in the life course during which young people are susceptible to poor body image and eating disorders, including anorexia nervosa and bulimia nervosa for girls and body dysmorphic disorder for boys. Although the gap is closing, most people with eating disorders (about 85%) are female. It is not uncommon for adolescents to diet, which they are more likely to do if they view idealized and, often digitally altered, images, especially in fashion magazines. As people age, gender plays a role because women are expected to look ageless throughout their lives, which causes depression when their looks, and therefore their feelings of social worth, decline. However, rising rates of cosmetic surgery for men as well as women attest that men also feel cultural pressures to be attractive.

## FUTURE DIRECTIONS FOR PHYSICAL ATTRACTIVENESS RESEARCH

Although a great deal is known about physical attractiveness and its effects on life chances, several important gaps remain. More cross-cultural and historical research is needed to understand how different groups of people have defined standards of physical attractiveness. In the United States and other developed societies, most research on physical attractiveness has been done with college-age convenience samples, which means that the results have less generalizability. Older and/or aging samples should be used to determine the relative importance and dimensions of attractiveness over time. In addition, more research is needed on the types and degrees of harm caused by the accentuated value of physical attractiveness in European and American cultures. Finally, there is a dearth of physical attractiveness research about men, racial/ethnic minorities, mature people, and gays and lesbians. For minorities, it remains unclear whether entry into the middle class is associated with assimilating to the physical attractiveness norms of the dominant culture (e.g., regarding body weight).

**SEE ALSO** Volume 2: *Body Image, Adulthood; Cultural Images, Adulthood; Obesity, Adulthood.*

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***Anne E. Haas***

# B

## BABY BOOM COHORT

The term *baby boom* generally refers to a large, usually sudden, increase in the number of births in a population, after which the number of births declines and eventually stabilizes at a lower level. The higher fertility period may last only a few months or persist for a number of years. The birth cohorts born during a baby boom are large relative to those preceding and following them, and the overall population is larger than it would have been had the baby boom not occurred.

Baby boom is also used to refer specifically to the sustained increase in fertility rates experienced in the United States in the decades following World War II (1939–1945). Because of the substantial magnitude and long duration of the postwar baby boom, the baby boom cohorts (composed of *baby boomers* or *boomers*) are especially large relative to other birth cohorts in the U.S. population. Consequently, they have had an impact not only on the size of the population, but also on American social, economic, cultural, and political life.

### DIMENSIONS OF THE U.S. BABY BOOM

The U.S. postwar baby boom began in 1946 and lasted until 1964. Following the technical definition of a baby boom, these start and end dates are based on quantitative assessments of postwar fertility trends and reflect the start of the significant fertility increase and the onset of significant decline (O'Connell, 2002). At times, commentators use other dates to demarcate the baby boom cohorts; however, such dates are usually based on criteria other than fertility trends, such as subjective judgments about the extent to which people born in various years share similar cultural or historic experiences.

The baby boom caught scholars and the public by surprise. In the 1930s American fertility rates were at a historic low, as the steady fertility decline that began in the 19th century was exacerbated by the economic difficulties of the Great Depression (1929–1939). In 1936 the total fertility rate (TFR), a measure used by researchers to gauge the level of fertility in a population, reached a prewar low of 2.15 children per woman (Heuser, 1976). The low levels of births led to both popular and scholarly concern about their potential consequences.

The increase in births between 1945 (TFR of 2.42) to 1946 (TFR of 2.86) surprised no one, as people made up births postponed during the war. However, the continuation of the upward trend and the persistence of the higher level for 19 years were indeed surprising. The TFR reached a maximum of 3.68 in 1957, 11 years after the war ended. Shortly thereafter, fertility began its steady decline and by 1964 had reached a TFR of 3.1. The years following are often called the *baby bust*, as fertility continued to decline, reaching a low in 1976 (TFR of 1.76) and then increasing slightly to hover around a TFR of 2.0 through the 1990s and 2000s (National Center for Health Statistics 2008). However, the term baby bust is something of a misnomer, as the decline represents a return to the long-term trend.

A key feature of the U.S. baby boom is that it was pervasive: Births increased among all racial, socioeconomic, and geographic groups. This pervasiveness within the United States was mirrored globally; many developed nations also experienced postwar baby booms (Morgan,

***Figure 1.*** *Total Fertility Rate, United States 1918–2005.* CENGAGE LEARNING, GALE.

2003). The baby booms were especially pronounced in the United States, Canada (peak TFR of 3.93), and Australia (peak TFR of 3.51).

## ORIGINS OF THE U.S. BABY BOOM

The proximate causes of any increase in the yearly number of births in a population are due to one of two things: either an increase in the number of women in the population who are "at risk" of childbearing or an increase in the likelihood that at-risk women will give birth. "At risk" means that one is a potential candidate to give birth; it typically refers to women between the ages of 15 and 45. Because of low fertility in the years prior to World War II, the absolute number of women of childbearing age actually declined during the baby boom. In other words, because birth rates were low in the late 1920s and 1930s, the number of women in their 20s and 30s during the mid-20th century was lower than at other points in recent history. This decline was offset somewhat by younger and more widespread marriage, so that a higher proportion of women were married and thus at risk of childbearing (childbearing outside of marriage was rare in the United States at this time).

Thus the principal cause of the postwar baby boom was an increase in the likelihood that an at-risk woman would give birth in a given year. Such an increase may be due either to shifts in the *timing* of childbearing, such that women have children earlier rather than later, or to increases in the *total number* of children a woman bears. In a well-known analysis, demographer Norman Ryder (1980) showed that half of the increase in births in the postwar period was because of differences in timing, in particular to women having children at younger ages. The remainder of the increase was due to increases in the average number of children women bore over the life course. However, much of this second component was due to increases in the number of first and second births, not to increases in higher order births. In other words, the baby boom was not caused by some women having huge families, but by nearly all women having at least one, and probably two, children during the baby boom years. Earlier in the century, especially during the Depression, a higher proportion of women remained childless.

As Ryder pointed out, identifying the proximate causes of the baby boom helped in the search for the fundamental causes, that is, the broad social and economic forces that encouraged couples who would have had children in any case to have them relatively young and couples who might have otherwise remained childless to have children. The most comprehensive answer to date was provided by sociologist Andrew Cherlin (1992), who argued that the postwar period was characterized by a temporary, and somewhat ahistorical, surge in familistic values. In combination with a robust economy, these values led most people to marry and have children at relatively young ages. For example, in the late 1950s and early 1960s, women typically married at age 19 and had their first child at age 20. Other scholars point to the introduction of the birth control pill in the early 1960s as a factor in the decline in births that heralded the end of the baby boom (Morgan, 2003).

## THE BABY BOOM AND SOCIAL CHANGE

The baby boom cohorts have had a significant impact on American society. At the most basic level, the U.S. population is larger than it would have been had the baby boom not occurred, due both to the boomers and to the boomers' children (larger cohorts produce more offspring). Beyond this, however, the large size of the boomer cohorts relative to cohorts born before and after means that the boomers have had a profound effect on American social, economic, cultural, and political life.

First, accommodating these huge cohorts has been a recurrent issue in the United States and the concerns of the age group occupied by the boomers at a given time have tended to dominate national agendas. Thus, as the boomers moved through childhood, to young adulthood, and into midlife, institutions such as schools, universities, and then labor and housing markets were forced to adapt to larger numbers. More recently, a great deal of attention has been directed to the potential impact of aging boomers on the economy, the health care system, and social programs for the aged.

Second, the large size of the boomer cohorts has meant that members of these cohorts faced increased competition for valued resources (e.g., admission to college, or entry-level jobs). This theme was highlighted by economist Richard Easterlin (1980), in the "cohort size hypothesis," which stated that all else equal, the average economic and social outcomes of a cohort will vary inversely with its size. Easterlin suggested that larger cohorts experience, on average, lower quality and levels of education, delayed or forgone marriage and fertility, depressed wages, blocked job mobility, more spells of unemployment, higher levels of daily stress, life dissatisfaction, and even higher suicide rates. Although these patterns are true for the boomer cohort as a whole, the hypothesis has been criticized for ignoring variation within cohorts. In addition, outcomes among members of the smaller baby bust cohorts have not been significantly better than those among the boomers, as the hypothesis predicts. Diane Macunovich (2002) has reformulated Easterlin's hypothesis to account for the different experiences of boomers born early (between 1946 and 1956) and late (between 1957 and 1964).

Third, the boomers played a pivotal role in the social changes that transformed the life course in postwar America (Hughes & O'Rand, 2004). As their lives unfolded, the boomers experienced the profound changes that marked the decades between World War II and the millennium, including a series of economic shifts and shocks, the civil rights movement, a change in U.S. immigration policy that opened the doors to millions of newcomers, a revolution in cultural values that changed the way Americans thought about the individual and society, new perspectives on gender roles, and the sexual revolution. In general, the boomers did not initiate these changes, although they are sometimes credited for doing so. However, because the boomers encountered these shifting social contexts in young adulthood, their lives were disproportionately affected. The choices that boomers made about education, work, and family then reinforced some existing trends and set other new trends in motion. The boomers responded to historical change by living in new ways, ways that set patterns for successive cohorts.

The lives of the boomers thus embody the postwar transformation of American society. Their experiences show some continuity with those of persons born earlier in the century. More noticeable, however, are the ways in which the boomers' lives differ from the lives of their counterparts in earlier cohorts. A key feature distinguishing the baby boom cohorts from cohorts born previously is their heterogeneity: that is, the boomers' experiences are not just different from those of their predecessors; their experiences are different from each other's (Hughes & O'Rand, 2004). For example, boomers are more ethnically diverse than cohorts born previously, and this diversity has increased as immigration swelled the ranks of native-born boomers. Boomers are highly unequal in economic achievements and educational attainments. On nearly every measure, family life among boomers is more heterogeneous; boomers have a wide array of family histories and at midlife live in a wide variety of family situations. Thus the net effect of social change has been to diversify the life course.

The lives of the boomers show clearly how the life course is shaped by the intersection of individual and historical time. As noted above, scholars, policy makers,

and the public are increasingly concerned about the impact of the aging of the large boomer cohorts. The heterogeneity of the boomer cohorts suggests that planning for these cohorts' old age will be challenging. At the same time, however, their prior history suggests that in later life the boomers will be able to adapt to social change.

**SEE ALSO** Volume 2: *Relative Cohort Size Hypothesis;* Volume 3: *Age, Period, Cohort Effects; Cohort; Population Aging.*


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*Mary Elizabeth Hughes*

# BIRACIAL/MIXED RACE ADULTS

In the contemporary United States, multiracial, or mixed race, adults usually are defined as those who self-identify as having two or more racial origins. Although this concept seems straightforward, there are contradictory historical and popular images of what constitutes a mixed race person, and both the criteria for inclusion and the terminology used to describe multiracial populations vary.

## DEFINING MULTIRACIAL IDENTITY

Sociologists have long recognized that racial identity is related to but conceptually distinct from racial ancestry. Racial ancestry is an objective measure of the geographic origins of a person's ancestors, whereas racial identities are largely subjective claims of membership within groups that are socially (rather than biologically) defined. Data collection on racial subpopulations usually favors the second concept. For example, the decennial census relies on individuals to identify their race by choosing from a set of listed categories. Individuals also may supply write-ins to provide additional detail (e.g., a specific tribe) or identify with an unlisted category. The 2000 Census was the first to allow multiple responses, and roughly 7 million persons, 4 million of whom were age 18 or older, reported two or more races. Only a small percentage (approximately 3%) of non-Hispanic Blacks and Whites claimed to be multiracial, but 14% of Asians, 40% of American Indians, and 54% of Pacific Islanders listed two or more races, as did 6.5% of Hispanics (people are asked about Hispanic ethnicity in a separate question). Regionally, one-fifth of Hawaiian residents self-identified as multiracial, and 5 to 12% of persons self-identified as multiracial in various counties in the Southwestern states (U.S. Census Bureau, 2001).

Although the official multiracial population includes everyone for whom two or more races are recorded on the census, mixed race persons commonly are viewed as the offspring of interracial unions. Both definitions are problematic. On the one hand, focusing only on persons who are recorded as multiracial excludes the offspring of interracial unions who self-identify or are classified as having only one race. For example, fewer than 55% of children from interracial households are recorded as biracial on the census (Jones & Smith, 2003), and many mixed race children come to identify with only one parent's race as they age (Harris & Sim, 2002); this leads to an even greater underreporting of multiracial ancestry among mixed race adults. On the other hand, limiting attention to the offspring of interracial parents excludes those whose parents are biracial or multiracial (and not necessarily intermarried) as well as those for whom parental data may be incomplete (e.g., single-parent households). Finally, neither definition expressly includes the tens of millions of persons who identify with contemporary racial and ethnic categories that are products of historically admixed (blended) populations (e.g., most Hispanics and Native Americans). As a result, standard reports of the multiracial population underestimate the number of Americans with a complex racial heritage.

## A HISTORICAL PERSPECTIVE ON MULTIRACIAL IDENTITY

Although multiraciality often is viewed as a recent phenomenon, historians have noted a rich history of population

blending that predates the founding of the United States. Admixed Spanish/indigenous peoples settled in what is now the American Southwest decades before the English landed at Jamestown in the early 17th century (Brading, 1993), and by the 19th century Americans of mixed African/European ancestry had a significant demographic presence in Charlestown, South Carolina; New Orleans; and other Southern cities (Davis, 1991), much like their modern-day equivalents in South Africa and Brazil (Fredrickson, 1981; Telles, 2006). As the 19th century progressed, there was a strong social backlash against intermarriage in the United States, culminating in the rise of antimiscegenation laws throughout the Jim Crow South. Efforts to enforce those bans led to radical changes in the classification of mixed race persons, whose identities were reassigned in accordance with "one drop" ideologies that classified persons with any African ancestry, visible or otherwise, as Black. Those efforts hid much of the nation's multiracial history both by shifting the balance of interracial unions to the illicit, often involuntary variety (Spencer, 2006) and by reallocating untold numbers and future generations of multiracial persons to either the Black or the White community (Piper, 1992).

With the rise of the "color line," multiraciality vanished from American racial consciousness. Before the changes on the 2000 Census there had been few efforts to count persons of mixed ancestry. The 1930 Census was the last to use the mulatto category, which was specifically for persons of mixed African/European heritage. The other major source of diversity—immigration—also fell from the historical highs set in the first two decades of the 20th century to a near trickle after the restrictive quotas set by the National Origins Act of 1924 (Massey, 2002). With the absorption of the children of the Southern and Eastern Europeans who immigrated at the turn of the century, the United States became a predominantly "White" nation with a small (approximately 10%) Black minority, at least according to the official record.

## THE OFFICIAL RETURN OF MULTIRACIAL IDENTITY

The situation changed dramatically in the decades after 1970, spurred by liberal immigration reform in the 1960s and the Supreme Court ban on antimiscegenation statutes in the landmark *Loving v. Virginia* ruling. The elimination of legal restrictions coincided with the growing acceptance of interracial unions, and rates of intermarriage for all racial and ethnic groups (Asians and Hispanics in particular) began to trend upward (Qian & Lichter, 2007). These trends have contributed to an increasingly diverse American population and a growing number of children and young adults who claim multiple racial origins.

The official statistical record was slow to record these changes, however. The census and most surveys continued to measure race with mutually exclusive categories despite growing evidence that racial boundaries had become blurred. Defying explicit instructions not to do so, more than 1 million Americans marked or wrote in multiple races on the 1990 Census (Office of Management and Budget, 1995), and during the ensuing decade a small but vocal coalition of multiracial and multiethnic advocacy groups sought and ultimately secured a place for mixed race persons within the federal statistical system (Williams, 2005), which was amended to allow individuals to "mark all races that apply," starting with the 2000 Census and later expanding to other national data sources (Office of Management and Budget, 1997).

With the option to report multiple races, there were reasons to expect that a large number of persons would choose to do so. First, Hispanics had become a sizable and fast-growing panethnic group, and their largely *mestizo* (mixed) heritage seemed difficult to reconcile with mutually exclusive racial categories (Moore, 1976). Second, the population of persons reporting indigenous ancestry on the 1990 Census had ballooned to just under 9 million—nearly five times the number who reported their race as American Indian (1.8 million)—sending a clear signal that the vast majority of persons with indigenous ancestry were of mixed descent (Nagel, 1996; Snipp, 1997). Third, in a striking divergence from the one drop ideology of the recent past, multiraciality had become an increasingly prominent fixture in popular culture. From Keanu Reeves to Tiger Woods and from Halle Berry to Barack Obama, some of the most widely recognized and celebrated Americans proudly acknowledge the complexity of their racial origins.

Although these factors imply that the number of Americans who could have claimed multiple races numbered in the tens of millions, there were indications that the actual count would fall short of those expectations, even substantially, long before the 2000 Census was conducted. Civil rights organizations opposed a stand-alone multiracial category, and Republican-sponsored bills to add an item of that type to the census were defeated. As Kimberly Williams (2005) showed, minority leaders feared that multiple racial identities would reduce the counts and even undermine the legitimacy of their constituencies. Because the government uses census counts to draw electoral districts, allocate Congressional seats, help monitor and enforce civil rights, and provide billions in federal funding to local governments and municipalities, any changes that threatened to reduce the (notoriously undercounted) headcount of minorities even further would not be welcome. Many viewed with suspicion the endorsements of an ostensibly progressive multiracial category by leading conservatives, some of whom expressly championed its existence as proof that race-attentive policy

had become unnecessary and unenforceable. The most telling preview of things to come was given by Charles Hirschman, Richard Alba, and Reynolds Farley (2000), who analyzed data from a census pretest that included different multiracial response options. The authors noted that only 1.5 to 2% of respondents reported multiple races, leading them to conclude that the new format probably would have little impact on the racial composition of the United States as a whole.

## FINDINGS FROM THE 2000 CENSUS AND 2006 AMERICAN COMMUNITY SURVEY

Their predictions were confirmed when the 2000 Census figures were released and especially when the original count of 7 million was revised downward after a large overcount of multiracial persons was discovered (U.S. Census Bureau, 2005). Later intercensal estimates showed little if any growth in the population of persons reporting two or more races between 2000 and 2006 despite an overall increase of nearly 20 million (mostly minority) persons during that period. As a result, the multiracial population of 6.1 million in the 2006 American Community Survey was nearly 1 million lower than had been enumerated in the census six years earlier (U.S. Census Bureau, 2007).

This trend, like the "disappearance" of mixed-race communities in the nineteenth and early twentieth centuries, cannot be explained by traditional demographic forces such as mortality, fertility, migration, and marriage rates. There is no evidence that interracial marriage declined appreciably in those years or any signs of excessive mortality or emigration among multiracial persons. In fact, every racial and ethnic group grew between 2000 and 2006, especially Asians and Hispanics, who are disproportionately multiracial. The idea that the mixed race population has experienced little if any growth suggests that reluctance to report multiple races has not abated.

Consistent with the perspective that racial identities are sociohistorical constructs, the underreporting of multiple racial origins at once reifies long-held, socially meaningful categories and discredits the notion that those categories represent discrete races with clear boundaries and separate lineages. However, although the lines between racial groups remain blurry, many racial disparities remain. It is certainly telling that even historically fluid and anthropologically suspect racial categories are correlated with so many contemporary life outcomes. Without further reductions in the social and economic inequities that reinforce the differences between racial groups, multiraciality is unlikely to displace discrete racial categorization even if that categorization persists at the expense of nuance and historical accuracy.

**SEE ALSO** Volume 1: *Socialization, Race;* Volume 2: *Ethnic and Racial Identity; Mate Selection; Racism/Race Discrimination.*

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***Anthony Daniel Perez***

# BIRTH CONTROL

In its broadest scientific scope, birth control may be defined as any attempt to limit the number or control the spacing of births. In this sense, birth control includes a wide variety of modern contraceptive technologies and traditional non-technological contraceptive methods, male and female sterilization, as well as the postconception birth control methods of abortion and infanticide. Modern contraceptives generally refer to technological methods, from condoms to birth control pills; traditional contraceptives generally refer to nontechnological methods, particularly withdrawal (ejaculation outside the vagina) and the rhythm method (which tries to determine women's fertile periods and avoid intercourse during those times). Although the role of postconception methods of birth control remains significant in both developed and developing nations, this entry will focus solely on birth control methods designed to prevent conception (i.e., contraception).

It should be noted that in common American parlance, birth control often connotes "the pill," whereas contraception connotes condoms or contraceptive technologies. Although the distinction between modern and traditional methods remains important in the study of birth control, the most important distinction in the study of contraceptive technologies is between barrier and hormonal or intrauterine methods of contraception. Barrier methods include condoms, diaphragms, and spermicidal agents and attempt to create a physical barrier between the sperm and the egg to prevent conception. They are coitus dependent, meaning that they are only used during and near coitus (i.e., sexual intercourse), and they are characterized by moderately high efficacy levels in the prevention of pregnancy, although male and female condoms offer extremely effective prevention against sexually transmitted infections (STIs).

Hormonal and intrauterine methods of contraception include oral contraceptive pills (OCPs) and intrauterine devices (IUDs) and are methods that attempt to suppress the release of eggs or create an inhospitable uterine environment for an embryo's development. These methods are used independently of coitus, meaning that they are used essentially at all times, and they are characterized by extremely high efficacy levels in the prevention of pregnancy but offer no protection against STIs. As fertility rates around the world have plummeted, contraception has become a normal part of adolescents' and adults' lives in many countries; meanwhile, fears about the spread of HIV have made condom use a major public health concern.

## TRENDS IN BIRTH CONTROL USE ACROSS TIME

Attempts at birth control have been made since ancient times. Such attempts included lambskin condoms and tortoiseshell diaphragms. By far the most successful of these premodern methods was withdrawal, which was an approved Islamic practice for centuries (Santow, 1995). Demographers believe that the first stage of the demographic transition in Europe, the period when birth rates declined sharply, was accomplished primarily through the use of withdrawal. By the late 1800s early versions of condoms and diaphragms had been invented, but the historical accounts suggest that the early formulations of these methods were awkward and that their use was not widespread because of physical discomfort and strong social stigma; the more contemporary versions of these contraceptives were not used until the 1930s.

The modern contraceptive era really began in the early 1960s with the introduction of the OCP, followed several years later by the development of the copper IUD. OCPs, IUDs, condoms, and diaphragms remained the primary methods of contraception from the 1960s to the 1980s. However, since the early 1990s, there has been a proliferation of birth control methods, including new OCP and IUD formulations, as well as hormonal birth control delivery through a patch, a ring, shots, and implants. Emergency contraception (popularly known as "the morning after pill") also emerged in the late 1990s as a method that women could take up to 78 hours after unprotected sex to prevent pregnancy.

Male hormonal methods have been in development for years, but at this writing, none are currently available on the market. Since the 1980s the HIV and AIDS crisis around the world has increased the desirability of condoms as a method of protection and prompted the development of a variety of improved condoms. Among these new condoms are female condoms, which are condoms that are inserted into the vagina and intended to provide a female-controlled method of STI prevention. Unfortunately, their successful use requires male cooperation, which may reduce their usefulness for women. Male condoms remain the standard

method of STI prevention. Because male and female condoms possess the dual capacity to prevent pregnancy and STIs, encouraging the use of condoms has become a major public health priority. In order to promote a greater variety of methods of both disease and pregnancy prevention, researchers have been pursuing the development of female-controlled vaginal microbicidal agents, which seek to kill sperm to prevent conception and disease; unfortunately, initial trials have not been promising in effectiveness and women's willingness to use them.

Access to OCPs and IUDs varied greatly among nations for decades, with many predominantly Catholic countries, such as Spain and Italy, not legalizing them until the late 1970s. The last highly developed country to legalize OCPs was Japan, which did so in 1999. However, dates of legalization often do not correspond directly with dates of widespread access. The United States, for instance, legalized OCPs in 1961 but continued to restrict unmarried women's access to them until 1972 when a Supreme Court ruling assured access. Although widespread use of hormonal or intrauterine methods is often still very limited in many developing countries, most new birth control methods—including the first OCPs—were first tested in developing countries.

As of the early 21st century, the most popular method of birth control worldwide is female sterilization, followed by the IUD, although there is significant variation by country. In the United States, for example, the most popular form of birth control is female sterilization, followed closely by OCPs; the pattern is similar in Latin America. Asia, dominated by the contraceptive patterns of China, shows a strong preference for female sterilization and IUDs but not OCPs. Although contraceptive use is uncommon in much of Africa, preference patterns there resemble those in Europe; on both continents, female sterilization is rare, and the favored methods are OCPs and IUDs.

Hormonal or intrauterine methods of birth control are distinguished by their extremely high rates of effectiveness in preventing pregnancy, their independence from coitus, their feminine control, and their medical supervision. In developed countries, where these methods are widely used, the combination of these factors has resulted in women experiencing an increase in control over their reproductive health, while producing a simultaneous increase in medical surveillance over women's bodies. OCPs are generally considered essential in propelling the *sexual revolution* in developed countries during the 1960s and 1970s and disconnecting sexual desire from pregnancy and childbearing, which had traditionally been closely linked, particularly through the institution of marriage. Prior to the post–World War II (1939–1945) baby boom, family size had been steadily declining, and the decline continued after the introduction of hormonal and intrauterine methods. Scholars generally agree that these contraceptive methods played a significant role in this family size decline but disagree about how large that role really was.

Although the role of hormonal and intrauterine methods in creating smaller families is debatable, the widespread use of these methods undoubtedly helped to create the expectation that the timing and number of births could be easily controlled. This expectation, in turn, allowed women to enter the labor market seeking not merely jobs but careers—that is, jobs that required extensive education and training and that assume a trajectory through promotions. In the early 21st century, many European countries are facing average fertility levels that are well below replacement levels (that is, below 2.1 births per woman), a situation that would probably be impossible without the widespread use of hormonal and intrauterine birth control.

The effect of hormonal and intrauterine birth control methods has been slower to reach many developing countries, where demand for smaller families is often lower and where medical institutions are often poorly equipped to meet existing demands. Scholars continue to debate the extent to which economic development and urbanization drive the demand for smaller families and birth control versus the extent to which smaller families and birth control permit greater development and urbanization. China continues to be the most famous case study for examining this question. Through the imposition of a system of major governmental rewards and penalties, China successfully created a massive demand for contraception (particularly the IUD) and overhauled normative values about family size. The centerpiece of China's population policy is its one-child policy, which penalizes most couples for having more than one child. Although China's population control program would probably not have been possible without hormonal and intrauterine contraceptive technologies, most demographers agree that the existence of birth control cannot in and of itself create a demand for smaller family sizes. Rather, the individual, economic, social, or cultural pressures for family planning must first be in place before birth control is likely to be used. Yet birth control is not always used to create smaller families. Researchers in Africa have documented many cases in which modern birth control methods are desired as a means to accomplish careful birth spacing, which in turn is viewed as a means to attain *larger*, not smaller, family sizes.

## BIRTH CONTROL USAGE AND EFFECTIVENESS

Evaluating the efficacy of birth control methods in preventing pregnancy (and to a lesser extent, in curbing

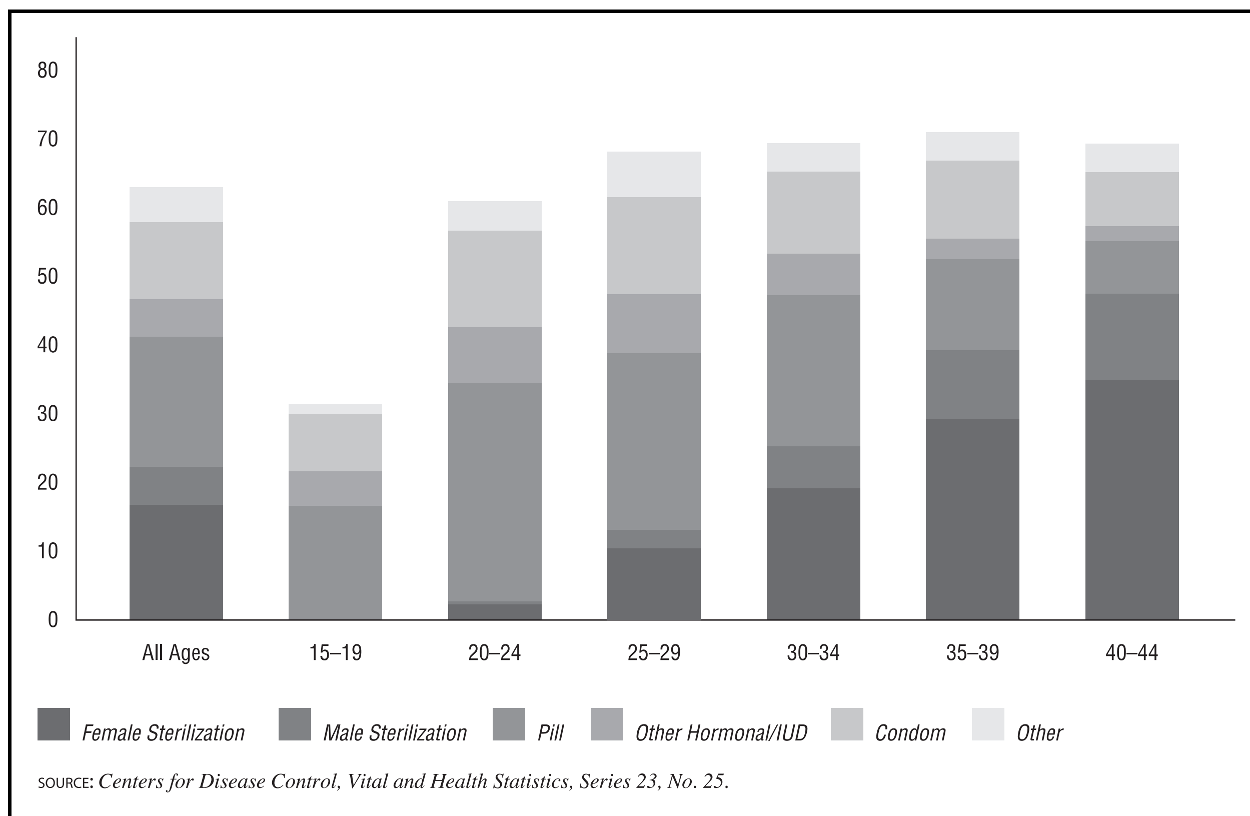


***Figure 1.*** *Perentage of current contraceptive use among all U.S. women, by age, 2002.* CENGAGE LEARNING, GALE.

disease transmission) is one of the major goals in the study of birth control. Clinical studies produce *perfect use* estimates by rigorously monitoring the use of a birth control method according to its instructions and calculating the probability of becoming pregnant while using the method in the first year. Perfect use statistics for most hormonal and intrauterine methods are typically around 99.9%, meaning that in the first year of use, 1 out of every 1,000 women will become pregnant if she uses the method according to directions. Given the millions of women using these methods, however, thousands may become pregnant every year despite these unlikely sounding odds. Perfect use statistics for barrier methods vary widely but are generally around 90%, meaning that in the first year of use, 10 out of every 100 women using them will become pregnant. For short-term methods such as OCPs and barrier methods, the probability of becoming pregnant declines in subsequent years of use (i.e., women are less likely to become pregnant in the second than the first year of use), but for long-acting methods such as IUDs and contraceptive implants, pregnancy is more likely to occur in later years of use.

Perfect use statistics are contrasted with *typical use* statistics, which are derived from surveys conducted with contracepting women about the actual likelihood of becoming pregnant while using a particular method. These statistics typically make use of questions asking women whether or not they were using a particular method in the month that they conceived and thus may include condom users who only used condoms once among many acts of intercourse during a month. Not surprisingly, typical use efficacy estimates are often much lower than perfect use estimates, with OCP effectiveness down to about 93% (7 in 100 women becoming pregnant) and condom effectiveness down to between 80 and 85% (20 to 15 in 100 women becoming pregnant) in the first year of use. Some researchers argue that the user error—for example, women forgetting to take their pills—should not be considered in evaluating contraceptive effectiveness, but others argue that considering the effectiveness of contraception without clinical assistance is essential to evaluating its real protective capacity.

In keeping with this line of reasoning, it should be noted that the difference between the perfect use and typical use rates of many long-acting methods of birth control, particularly the IUD and birth control implants, is almost nonexistent, meaning that they generally achieve their theoretical effectiveness level in normal

use. Birth control researchers are also attentive to socioeconomic differences in method choice (that is, what groups prefer which methods and why) and failure rates, with statistics often indicating that underprivileged women are less likely to use contraceptive methods consistently and more likely to experience contraceptive failures even when they do use them, although the mechanisms behind this trend are not well-understood.

One of the major goals of birth control researchers has been to identify women who say they do not want children in the near future but who are not using a method of birth control; in aggregate, this is referred to as *unmet need.* Numerous criticisms have been leveled against the traditional conceptualization of unmet need, particularly its focus on hormonal and intrauterine methods of contraception. Critics point out that many of these women have valid reasons for not using modern methods of birth control and that portraying these women as traditional or primitive for failing to use appropriate methods ignores the many legitimate objections that women have for avoiding these methods. These objections include the many uncomfortable side effects that arise from hormonal and intrauterine birth control, such as disrupted menstrual cycles and moodiness, diminished pleasure from condoms, and financial expense. Feminist critics have also argued that fertility researchers' almost exclusive emphasis on hormonal and intrauterine methods ignores the problematic implications of widespread medical surveillance of women's bodies and vastly underestimates the health consequences of extended hormonal and intrauterine method use. Researchers have responded to these criticisms in ways that have reshaped the study of birth control.

First, rather than focusing exclusively on women's unmet need, researchers have moved toward a greater focus on the contraceptive needs of women and men, often specifically looking at couples. Whereas earlier research was frequently accused of portraying men as obstacles to women's contraceptive access, recent research has begun to look more broadly at the way that women and men facilitate and deter each other's contraceptive use. Second, in response to the criticism that unmet need did not adequately address the relationship between fertility desires, contraceptive desires, and contraceptive use, researchers have begun to explore the relationship between pregnancy intentionality and birth control use in more depth. *Pregnancy intentionality* refers to women's, men's, and couple's desires and intentions for more children. Research has emphasized the often uncertain nature of pregnancy intentionality, conflicts between partners, and the effects of these patterns on contraceptive use. Both of these changes to contraceptive research have been strongly informed by the contributions from qualitative research (interviews, focus groups, and ethnographies), both in developed and developing countries. Although the study of contraception continues to be dominated by quantitative research based on surveys, mixed-method studies combining qualitative and quantitative data, as well as qualitative studies on their own, have proliferated in this field. Qualitative contributions have demonstrated the role of social networks in spreading contraceptive use, as well as illustrating some of the social and cultural obstacles people encounter in trying to negotiate contraceptive use with significant others.

Despite these developments, research on birth control use around the world continues to focus disproportionately on adolescents. Critics argue that this focus both reflects and contributes to the problematic aspects of adolescent sexuality, but proponents argue that contraceptive habits formed in adolescence will probably continue into young adulthood. In the U.S. context, at least, the emphasis on adolescent contraceptive use seems perhaps unwarranted because unintended pregnancies are actually most likely to occur to women between ages 18 and 24. Research focusing specifically on adults' contraceptive use has been so lacking that one of the key journals in the field, *Perspectives on Sexual and Reproductive Health*, plans a special issue on the subject. The paucity of research in this area raises many questions about birth control use across the life course, particularly in the face of major fertility-related events, such as abortion, childbirth, marriage, and divorce. Scholars do not know, for example, how women and men decide that they are finished with childbearing, even though they regularly refer to *completed fertility*. Researchers also know that rates of male and female sterilization differ considerably among nations yet know very little about why this is.

Another issue that has been neglected in the study of birth control is the way that considerations of pleasure influence contraceptive use, decision making, and negotiation. Researchers have posited many different reasons why condom use in every society is so much lower than public health officials would like, often emphasizing women's lack of control over male condom use. However, few researchers have addressed the fact that both men and women in many different cultures feel that condoms seriously diminish their sexual pleasure, which may be the most salient reason for not using them. The limited attention the issue has received has almost always been directed toward reductions in men's sexual pleasure, typically ignoring women's lost sexual pleasure from condoms as well as their reduced libido from many hormonal methods.

## POLICY ISSUES

Birth control continues to be the subject of religious, policy, and political controversy. The Catholic church still officially condemns all methods of birth control

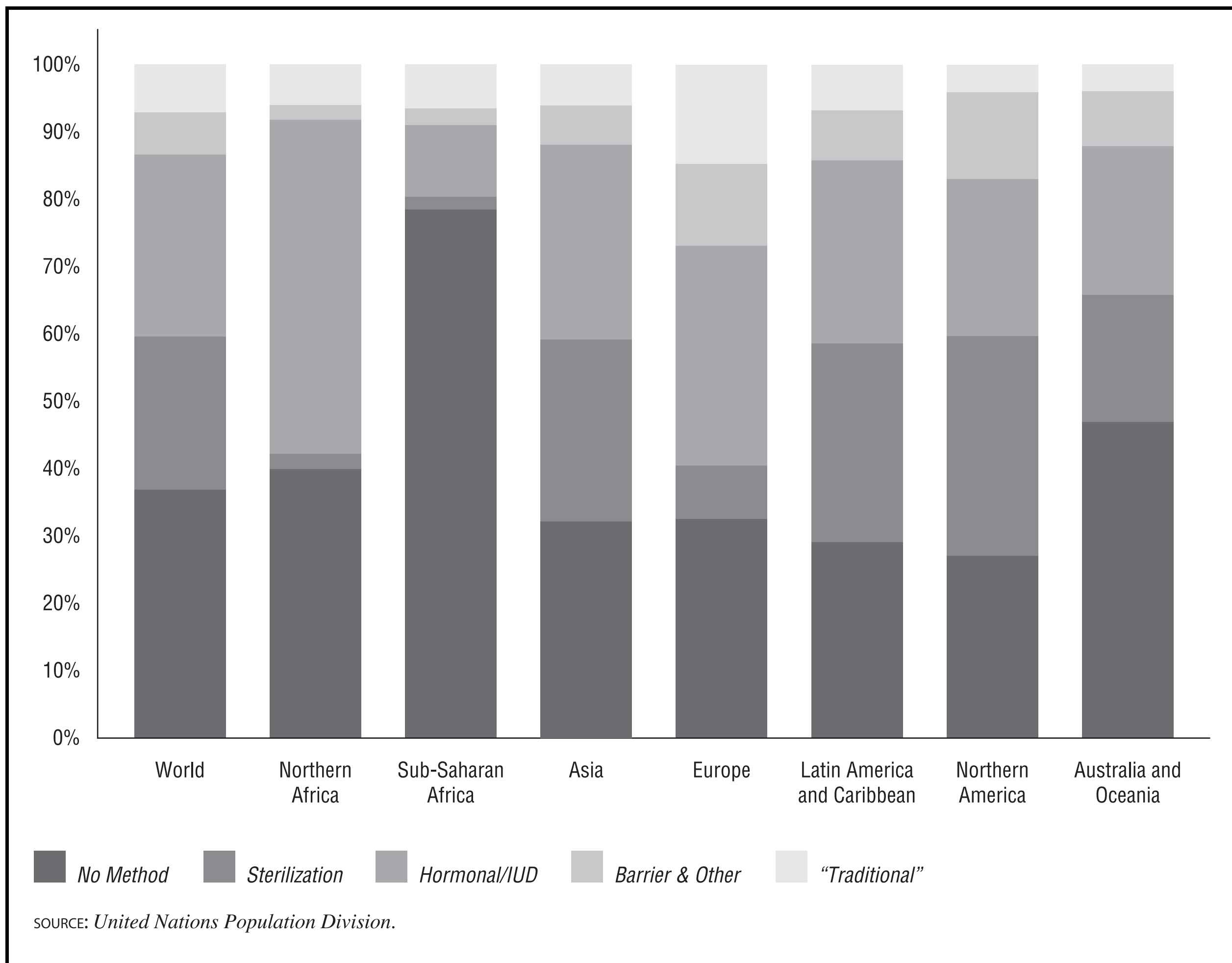


***Figure 2.*** *World contraceptive use trends among women, 2007.* CENGAGE LEARNING, GALE.

other than the natural family planning method it developed based on the rhythm method; yet there is little evidence that most Catholics obey this religious tenet. Other religious groups, such as the Mormons, strongly promote the value of large families while still approving of birth control. National policies likewise range from active government promotion of birth control in China and Iran to government discouragement of population limitation in some African countries.

In general, developing countries frequently struggle with issues of access to, availability of, and acceptability of contraception. One of the greatest obstacles for developing countries is establishing a medical infrastructure capable of managing women's reproductive health care needs, from the safe implantation of IUDs to the timely distribution of OCPs. Normative societal mandates also may prevent unmarried women from obtaining contraceptives, especially in cultures where husbands must approve of their wives' use of contraceptives. Furthermore, distrust of foreign doctors and medicine often make many people in developing countries wary of unfamiliar contraceptive methods. Contraceptive concerns vary widely by region, with some African countries, such as Botswana (where one in three people may be infected with HIV), facing an HIV epidemic that makes condom use seem essential but other methods of birth control superfluous. Meanwhile, many Asian countries, particularly India and China, have made population control a major social priority and have been successful at distributing contraceptives to large swaths of their populations.

Birth control controversy in developed countries also focuses around access but more specifically the issues of adolescents' access and medical intervention. Some countries allow adolescents unfettered access to contraception, whereas others require parental permission for them to obtain it. Even when it is ostensibly available to them, adolescents may have difficulty obtaining contraceptives because of financial, transportation, or confidentiality

issues. In many countries, hormonal contraceptives are available without a doctor's prescription (over-the-counter), whereas others, such as the United States, restrict access through medical providers. The United States recently made emergency contraception available to people over 18 over-the-counter, but the issue was clouded in controversy, especially because many view emergency contraception as an abortion-inducing intervention. Political controversy also continues about the extent to which young people should receive formal education about the use of contraception. Research, however, overwhelmingly demonstrates that education about contraceptive methods does not make adolescents more likely to have sex but does make them more likely to use protection when they do. For both adolescents and adults, birth control use is essential in assuring family limitation and the prevention of STIs, and the study of birth control provides insights into the most efficient and user-friendly means to accomplish these ends.

**SEE ALSO** Volume 1: *Sex Education/Abstinence Education; Transition to Parenthood;* Volume 2: *Abortion; AIDS; Sexual Activity, Adulthood;* Volume 3: *Demographic Transition Theories.*

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***Julie Fennell***

## BODY IMAGE, ADULTHOOD

Although scientists have always regarded body image as more than a mental photograph of oneself, its scientific meaning has evolved over time. In the early 1900s, body schema was a neurological concept—the brain's registration of the body's sensory and motor activities. It emerged in an attempt to understand the *phantom limb* phenomenon, in which patients felt pain or other sensations from amputated limbs.

Subsequently, a psychoanalytic approach to body image was developed. Through the works of Paul Schilder (1886–1940) and Seymour Fisher (1922–1996), body image came to be seen as the complex experience of one's physical being at varying levels of consciousness. Because the body is the boundary between the self and everything outside of the self, one's experience of the body was viewed as the result of early emotional learning. Thus, from a psychoanalytic perspective, body image has less to do with conscious feelings about the body per se than with unconscious feelings about the self. Projective methods (e.g., inkblot and drawing tests) are typically used to study body image from this perspective, albeit with dubious success.

A more recent perspective (e.g., Cash & Pruzinsky, 2002) regards body image as a perceptual representation of the body's size and shape. This view emerged from researchers' attempts to understand the distorted perceptions held by patients with eating disorders, such as anorexia nervosa and bulimia nervosa. However, the empirical meaning of perceptual size distortion is unclear and it represents a very limited conception of body image.

The most contemporary perspective defines body image as a multidimensional attitude toward one's own physical characteristics, especially one's appearance (Cash & Pruzinsky, 2002). Body-image attitudes are evident in people's mostly conscious, body-related cognitions, emotions, and behaviors. A distinction is made between two core dimensions: *Body-image evaluation* pertains to one's feelings about one's looks, such as satisfaction or dissatisfaction, whereas *body-image investment* refers to the psychological importance of one's appearance to one's sense of self and self-worth. Researchers typically use self-report questionnaires to measure body-image attitudes—including evaluations of physical attributes, beliefs about

the importance of one's appearance, body-image emotional reactions in everyday situations, and behaviors to manage one's appearance or one's own reactions to it. Popular validated questionnaires include the Body Shape Questionnaire, Multidimensional Body-Self Relations Questionnaire, Body Esteem Scale, and Appearance Schemas Inventory.

Since the late 1980s body-image research has flourished. Thousands of scientific studies and more than a dozen scholarly books have been published on the subject. In 2004, a new journal commenced, *Body Image: An International Journal of Research*. This continuing boom is likely the product of several forces—for example, the recognition of the pivotal importance of body image in the growing prevalence of eating disorders, feminist concerns about how cultures socialize girls and women to overinvest in and loathe their appearance, and an emergent realization that the field must expand to include children and men and to study the body-image issues inherent in many medical conditions or their treatment.

## BODY-IMAGE DEVELOPMENT

A person's sense of self is partly rooted in the experience of embodiment, that is, the experience of existing within a physical body. Socialization about the meaning and significance of physical appearance to the self is influenced by the norms and expectations of one's culture, family, and peers. Social learning entails the acquisition of emotion-laden attitudes about one's own body. Largely as the result of explicit and implicit social feedback, people acquire beliefs about the acceptability and attractiveness of their physical characteristics. They develop beliefs about what they look like, and they also internalize standards or ideals about what they should look like and how important these standards are.

An understanding of body image must recognize that the body and its appearance change over the life span. Adolescence is a period that involves increased personal and social emphasis on physical appearance. Appearance-altering conditions such as weight gain or facial acne can diminish a teenager's body satisfaction and sense of social acceptability. These experiences stamp body image in ways that can persist into adulthood. During adulthood, the normal physical changes that come with aging can lead some appearance-invested individuals to worry about losing their youthful looks. For example, common genetic-pattern hair loss can provoke body-image concerns among many men and women. Still, cross-sectional research reveals that older adults do not necessarily have a more negative body image than younger adults. One explanation is that aging tempers one's investment in physical appearance relative to other sources of self-worth, such as family and career roles.

Whereas some physical changes result from the biological aging process, others are precipitated by unforeseen illness or injury, such as traumatic burns, HIV or AIDS, and cancers and their treatment (e.g., chemotherapy or mastectomy). These conditions challenge body-image adaptation, as individuals must integrate their altered appearance into their self-view and manage unwanted social consequences of this altered appearance. Acutely acquired disfigurements are generally more disruptive of body image than are congenital deformities that are incorporated into one's early body-image development.

## BODY IMAGE, GENDER, AND CULTURE

National surveys from the 1970s through the 1990s, as well as some meta-analytic research, point to Americans' growing body dissatisfaction, especially among women. Regardless of respondents' age or when the survey was conducted, women consistently report less favorable body-image evaluations than men. For both sexes, body weight, shape, and muscle tone are typically the foci of greatest dissatisfaction. Most weight-dissatisfied women believe that they are too heavy, even if average in weight. By contrast, men who are unhappy with their weight are fairly equally divided into those who believe they are either overweight or underweight. Cross-sectional studies suggest that, despite heavier body weights, college-attending women may have become more accepting of their bodies than was true in the 1990s.

Relative to men, women are more psychologically invested in their appearance and engage in more appearance-management behaviors. These differences mirror European and North American society's greater emphasis on a woman's attractiveness. Considerable evidence points to powerful media influences on societal physical ideals, which if internalized can produce overinvestment in appearance and body dissatisfaction.

To understand the role of cultural differences, body-image researchers have studied various subgroups within European and North American societies. For example, African American women appear to have a more positive body image than European American women, and this is especially apparent at higher body weights. Like various African cultures, African Americans view a more full-figured female shape as feminine and attractive. Individual differences in body image may also depend on sexual orientation (Roberts et al., 2006). Relative to heterosexuals, gay men are more invested in and less satisfied with their appearance. This difference may reflect their inclination to please men who, to a greater extent than women, stress physical attractiveness as a criterion of sexual or romantic desirability. Although not scientifically clear, lesbians may be less appearance-invested

and more satisfied with their bodies than heterosexual women.

## BODY-IMAGE DISSATISFACTION, DISTURBANCES, AND DISORDERS

Not only is body dissatisfaction a common human experience, for some it can lead to psychosocial problems. Body-dissatisfied individuals are at risk for poor self-esteem, social anxiety, depression, sexual difficulties, and eating disturbances. In turn, these problems can also impair body image satisfaction. However, body-image dissatisfaction is not the same as body-image disturbance. The latter occurs when dissatisfaction entails preoccupation, self-conscious distress, avoidance of situations and experiences that portend such distress, and interference with everyday life.

Substantial research attests to the central role of body-image disturbance in eating disorders. Persons with eating disorders hold an extremely disparaging view of their body weight and shape and overestimate their true size. They are also heavily invested in their appearance as a criterion of self-worth. Prospective studies suggest that these body-image disturbances are precursors to disordered eating and serve to worsen and maintain the behavior once it has begun.

Another severe body-image disorder is body dysmorphic disorder. This disorder was included in the *Diagnostic and Statistical Manual of Mental Disorders* by the American Psychiatric Association in 1994, although it was recognized by Asian and European clinicians long before this time. Comparably affecting men and women, body dysmorphic disorder refers to an excessive preoccupation with a nonexistent or minor physical defect. Persons with this disorder believe that the so-called defect is quite socially noticeable. They spend an inordinate amount of time compulsively inspecting their appearance in mirrors or other reflective surfaces, and they self-protectively avoid ordinary social events because they expect to experience intense self-consciousness and anxiety. Although they may recognize that their perceptions are distorted, they are more likely to consult with a medical or surgical professional to fix the perceived physical flaw than to seek mental-health assistance. A subtype of this disorder is muscle dysmorphia, in which the subjective focus is on perceived insufficient muscularity. This condition is more prevalent among men, who actually may be very muscular and may exercise or use bodybuilding supplements to excess.

## BODY-IMAGE IMPROVEMENT

The most common approach to body-image improvement is to alter the body so that it will conform to the person's body-image ideals. Many people pursue weight loss, physical exercise, and cosmetic surgery, as well as aesthetic grooming changes in attempts to create a more personally satisfying appearance. Such body-modifying methods can improve body-image satisfaction. However, critics argue that many of these so-called remedies have inherent health risks and that all ultimately reinforce conformity to unrealistic expectations of physical attractiveness and fail to reduce excessive body-image investment.

Psychotherapeutic interventions have been designed to promote body acceptance without bodily change. Most thoroughly studied is cognitive behavioral therapy (CBT), which has proved effective for a range of psychosocial disorders. It is based on the premise that people can overcome problems by learning more adaptive patterns of thought and action and by eliminating self-defeating patterns. Considerable research supports the effectiveness of cognitive-behavioral body-image therapy with various populations, including body-dissatisfied college students, obese persons, and individuals with eating or body dysmorphic disorders. Such body-image improvement also promotes gains in self-esteem and other aspects of psychosocial well-being. For some people, CBT programs can be successfully implemented as structured, guided self-help via workbooks or Internet-based programs.

**SEE ALSO** Volume 2: *Attractiveness, Physical; Obesity, Adulthood.*

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***Thomas F. Cash***

# C

## CANCER, ADULTHOOD

SEE Volume 3: *Cancer, Adulthood and Later Life.*

## CARE WORK

SEE Volume 3: *Caregiving.*

## CAREERS

In a life course approach careers are defined as observable pathways that consist of patterned trajectories and transitions over time. Although the term *career* most often refers to a series of occupational positions, life course scholars apply it to a range of pathways, such as family careers, mental health careers, and relationship careers.

Research documents the socially patterned timing of career transitions as well as socially patterned career trajectories (or sequences) and the way those patterns differ by gender, age, cohort, social class, race/ethnicity, health, education, occupation, and/or industry. Careers also are studied in terms of people's assessments of their past trajectories, current situation, and prospects for the future. In light of the centrality of paid work in contemporary adult development, this entry focuses on occupational paths and beliefs.

Individuals often assess their occupational careers as coming up short in terms of cultural expectations, making cognitive appraisals of being on or off time in their occupational careers. Their yardstick is what Phyllis Moen and Patricia Roehling (2005) call the career mystique: ingrained cultural beliefs (institutionalized in rules, regulations, and expectations) about continuous long-hour hard work throughout adulthood as the path to status, security, and satisfaction. In other words, most people have an ideal concept of a career as the path to the American dream of upward mobility, an orderly and hierarchical progression up occupational ladders.

### CAREERS AS BLUEPRINTS FOR THE ADULT LIFE COURSE

The idea of a career is a modern invention, having emerged as a social fact only after the development of corporations, bureaucracies, and white-collar employment. As C. Wright Mills (1956) pointed out, before the Industrial Revolution, which occurred in the United States in the second half of the 19th century, most people worked in agriculture or a family business. Though individual farmers, craftspeople, and family entrepreneurs might have had life plans, they did not have careers. It was only after industrialization and in tandem with the Great Depression, two world wars, and a booming postwar economy that a large white-collar and unionized blue-collar workforce experienced the bureaucratization of occupational paths or careers.

Governments, schools, and workplaces developed policies and practices in the 1930s through the 1960s that institutionalized careers as identifiable pathways of full-time employment. Those in white-collar and unionized blue-collar occupations could count on wages and job security increasing with seniority, from entry-level jobs for young people to retirement. Educational, labor market, and

retirement policies based on the career mystique produced a three-part life course: full-time education as preparation for employment, an adulthood of continuous full-time employment, and the one-way, irreversible exit to the leisure of retirement, thereby opening job opportunities to younger cohorts of employees. Thus, in the middle of the 20th century most middle-class white men followed a lockstep pattern: a one-way path from schooling through full-time continuous occupational careers to retirement.

A number of life course scholars have pointed to occupational careers as providing an organizational blueprint for the adult life course. Careers embody both structure (relationships between jobs, public- and private-sector policies and practices) and process (moving through identifiable career lines, taking on the occupational identity such as lawyer or doctor). As paid work in corporations and governments replaced farming, the role of the employee became central in contemporary society and the work career came to shape life chances, life quality, and life choices in virtually every arena.

## OUTSIDE THE CAREER MYSTIQUE

The lockstep career mystique is a myth and has never been a reality for most ethnic minorities, women, and poorly educated adults. Moreover, the career mystique has become increasingly obsolete even for middle-class men. In a competitive global economy seniority no longer provides protection against job insecurity. Still, this myth is built into the social organization of paid work and continues to shape and define adulthood, life chances, and life quality. Public policies (such as Social Security and unemployment insurance) and corporate policies (hiring, recruiting, firing, promoting, retiring) have reinforced the career mystique by promising rewards to people who work hard, continuously, and full time throughout their adult years in a single organization or "ladder hop" across organizations. Until recently employers have tried to recruit and retain people who are committed to such full-time continuous employment by offering them health insurance and pensions.

One result of this institutionalization of the lockstep career mystique is that individuals who experience uneven or downward career pathways have been seen and often see themselves as deviant. Employers view people moving in and out of the workforce and those employed less than full time as less committed to their jobs, reaping and deserving fewer economic and psychological rewards. Moreover, because a career is equated with occupational history, unpaid work, whether as a participant in a family business, a homemaker, a family care provider, or in formal or informal civic engagement, has been rendered marginal to the real work of society. Individuals who do not or cannot follow this lockstep pattern of continuous full-time work (e.g., those in insecure jobs, those with family responsibilities) are penalized.

## DIVIDING ADULTHOOD BY GENDER

Occupational careers have been fundamental to men's identities—the purported path to security, success, and status—and for their families as well. However, men in the middle of the 20th century were able to lead work-centered lives because their wives took care of their personal and domestic needs and responsibilities and often supported their career progression behind the scenes. By contrast, women's lives have been more contingent and accommodating than lockstep, developing in relation to marriage, motherhood, economic exigencies, and their spouses' occupational careers. However, minorities, the poor, and the poorly educated could follow neither career nor homemaking paths, often moving in and out of jobs that were unrelated (not leading to a particular career pattern) and poorly paid.

Nevertheless, most Americans in the 1950s and 1960s wanted a middle-class lifestyle and worked to achieve it. The breadwinner/homemaker template provided cultural guidelines and clear options related to occupational careers, family careers, and gender that effectively decoupled paid work from unpaid family care work, creating an imaginary divide between them. The ideal-typical "Ozzie and Harriet" family was seen by most Americans in the middle of the 20th century as the ideal arrangement even for those who could not afford or fit its parameters.

Betty Friedan's *The Feminine Mystique* (1963) depicted half of this cultural divide: the belief that women could achieve total fulfillment by devoting themselves to full-time domesticity as homemakers for their husbands and children. However, Friedan paid no (or scant) attention to the career mystique: the belief that most American men could achieve total fulfillment by devoting most of their adulthood and most of their waking hours to their jobs. Though some authors captured the reality of men's lives—C. Wright Mills wrote *White Collar* (1956), William H. Whyte described *The Organization Man* (1956), and Sloan Wilson provided a vivid fictional account in *The Man in the Gray Flannel Suit* (1955)—none of those works had the impact of Friedan's book.

The women's movement of the 1960s and 1970s effectively destroyed the feminine mystique. In rejecting its norms and values, many women in the second half of the 20th century sought equality by embracing the career mystique, wanting men's jobs, salaries, and power and status. Women now constitute nearly half the U.S. workforce, but careers remain designed for those who can

focus their time and efforts fully on their jobs. Outdated policies and practices combined with the growing numbers of households with all adults in the workforce have created a fundamental mismatch. Employees struggle with and try to find strategies to adapt to their obligations at work along with the unpaid care work of families, homes, and communities.

In the 21st century most American women have not simply traded one mystique for another, moving from strictures about the good mother or the good wife to the good worker, but instead are trying to fill all three roles. However, the outdated structures and cultures of jobs and career paths make it impossible to do so. Research shows that women who scale back at work, take time off, or shift to jobs that are less time-consuming pay an economic price.

The pervasive gender bias in the ways people think about and study careers also is reflected in the exclusive emphasis on individuals. Dual-earner households have become the norm, and so there are often two occupational paths in a single household. Research shows that couples strategize, prioritizing one person's (typically the husband's) career by having the other person (typically the wife) modify her occupational commitments in light of family considerations as well as considerations of the spouse's career, scaling back to part-time work or leaving the workforce when family care demands are high. Most employees and family members also adjust by modifying the family side of the work-family equation by delaying marriage and/or parenthood and/or having fewer children.

## OUT OF STEP

The 20th-century contract between employers and employees that undergirded career paths was based on the seniority system and the notion of a primary and a secondary workforce. Middle-class (mostly White) men with many years of employment were sheltered from economic dislocations. It was the last hired—typically women and minorities—who were the first fired. However, thus far in the 21st century the proportion of workers under union contracts have reached an unprecedented low, and implicit contracts (trading mobility and job security for a continuous commitment to work) have disappeared.

The career mystique vision of orderly careers as the successful path through adulthood has lagged behind 21st-century realities. Unprecedented numbers of Americans are college-educated, expecting to have interesting, challenging, secure jobs but not always finding them. Salaries no longer are sufficient to support families on one income. The amenities of the 1950s—air-conditioning, color televisions, fancy appliances—have come to be viewed by most Americans as necessities. Most workers are part of dual-earner households, married to other workers. Growing numbers of workers are heads of single-parent households, doing all their families' paid work and unpaid care work. In fact, in 2001 only one in four workers had a full-time homemaker for backup and support. Another challenge looms on the horizon: The workforce is aging as the large boomer cohort moves into and through their fifties and sixties.

Equally consequential, the U.S. economy has become a globalized economy, grappling with new technologies, international workforces, and fast-paced changes, including mergers, buyouts, and acquisitions. The ambiguities and uncertainties in boardrooms, offices, and factory floors affect the sensibilities of workers and their families as they face the realities of frequent employer restructuring, often accompanied by forced early retirements, layoffs, fewer benefits, and greater workloads.

What has not changed is the career mystique: Employers and workers see good employees as those who are willing to make heavy investments of time and energy in their jobs. Not for the U.S. workforce are Western European institutions such as long summer and winter vacations, paid parental leave, and part-time jobs with benefits. Studies show that Americans pride themselves on working hard, taking work home, staying late at the office, and not taking all their vacation time.

## SHAPING COGNITIVE BELIEFS, VALUES, AND EXPECTATIONS

The career mystique not only became an organizing principle shaping options and opportunities over the life course, it also shaped people's identities, self-appraisals, and expectations for the future. As Stephen Barley (1989) pointed out, early sociologists acknowledged the "Janus-like" aspects of the career concept as both institutional (a series of structural positions) and subjective (ways employees define and give meaning to their unfolding occupational experiences). Occupational careers as movement through positions also entail changes in peoples' subjective self-definitions, expectations, evaluations, and meaning.

Walter Heinz (1996) pointed out that status passages such as job shifts and retirement "link institutions and actors by defining time-tables and entry as well as exit markers for transitions" (pp. 58–59). However, institutional guidelines for career paths are outdated. Against a backdrop of 21st-century social transformations, even white men with college educations and professional experience are finding fewer career ladders that bring job and income security, much less success.

## FUTURE DIRECTIONS

Human development over the life course is shaped by socially patterned expectations related to roles in the form of norms about the right time for adults to begin a career job, get a promotion, or retire, as well as socially structured entry and exit points and durations that shape the opportunity for and reward some pathways

and not others. Studying occupational careers involves thinking about and attending to employment over time, referring to, for example, the processes of job development, mobility, and plateauing as well as entries and exits. Three key themes characterize a life course perspective on career development. The first places careers in context, considering the ecology of employees' social location, in terms of their historical cohort, ethnicity, gender, life stage, occupation, and workplace. All these factors shape opportunities and constraints at work and at home. The second is the notion of linked lives, as individuals and couples strategize to synchronize their goals, expectations, and obligations. The third theme is the dynamic notion of pathways, involving transitions, trajectories, and timing.

The term *career* usually refers to recognized patterns of organizational and occupational movement throughout adulthood and the widely accepted career mystique that depicts lockstep careers as the path to the American dream. Even though notions of orderly careers are out of date, government and business rules and regulations continue to reinforce the primacy of full-time continuous employment, rendering marginal all other types of labor force attachment: part-time jobs, temporary work, and intermittent employment. The solution, some scholars have concluded, is to enable customized rather than lockstep career paths, widening the options for employees at different ages and life stages. Research is needed on customized career innovators: both employers and employees who are reshaping possibilities.

The study of careers contributes to the understanding of the dynamic links between lives and organizations as well as the dislocations brought about by both the work-family mismatch and the job security mismatch. In 1977 Seymour Spilerman pointed to the discrepancy between career characterizations and accounts on the one hand and people's actual patterns of job sequences on the other. These discrepancies may have become even more acute. What is required are empirically derived new typologies that capture the experiences of contemporary employees in different employment and home environments, their assessments and strategic responses to those experiences, and the consequences for their health and well-being as well as for business, the family, and society.

A global risk economy, advances in communication and information technologies, an aging workforce, and a workforce with family care responsibilities mean that conventional beliefs about careers are outmoded, with diminishing numbers of workers fitting the traditional orderly career pattern. New public policies and practices and new corporate rules and regulations will be required to widen the career path options and safety nets. However, the concept of careers remains a useful lens with which to view both the dynamic relationship between choice and constraint and the dynamic interplay between organizations and lives that play out over time.

**SEE ALSO** Volume 2: *Employment, Adulthood; Job Change; Occupations; Social Class;* Volume 3: *Moen, Phyllis.*

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***Phyllis Moen***

# CHILDBEARING

A life course framework is central to the study of childbearing. Physical maturation is required before women can bear children and before men can impregnate women. This reproductive potential, or fecundity, generally lasts about three decades for women and considerably longer for men. During these fecund years, women could conceivably have a birth each year, but such high levels of childbearing (30+ births per woman) are exceedingly rare. The survival

strategy of humans has focused instead on far lower levels of childbearing and intense efforts to increase infant and child survival. The strategies used to limit fertility and aid child survival vary dramatically across societies.

For instance, in many societies marriage norms limit coitus (i.e., sexual intercourse), and therefore childbearing, to particular ages and circumstances. Other norms have specified times when married women should not have coitus or the length of time that they should breastfeed, increasing the interval between births. Thus, at the heart of fertility research is not just the number of births a woman has in her lifetime but the ages at which she has them, their spacing vis-à-vis their siblings, and their sequencing vis-à-vis other life events such as marriage. Childbearing is a prototypical life course event—childbearing is possible for only a segment of the life course, and it is a repeatable event whose timing and sequencing have demonstrable effects on subsequent fertility, other life events, and overall life chances.

Despite the necessary role of males in reproduction, the fertility research literature focuses mainly on women. The reasons are many. First, only women become pregnant and give birth. Thus, the study of maternal and child health closely links women and fertility. Second, women are frequently the primary child caretakers, and, in general, women's lives are more influenced by childbearing and childcare than are men's. These mother–child bonds and interactions generally make mothers more knowledgeable and accurate respondents to surveys that assess matters of childbearing and rearing. As a result of these factors and others, researchers tend to choose women as research subjects. This woman-centered focus does cause some problems, but some of these have been addressed since the late 20th century.

## POPULATION-BASED MEASURES OF FERTILITY

Childbearing is generally measured as live births per woman. Miscarriages, abortions, and stillbirths are not counted (live births plus these events equals the number of recognizable pregnancies), but infants who die very early in life (even in the first day of life) are included. Births can be summed across a woman's lifetime to produce the number of children ever born (CEB), and the mean CEB is a useful childbearing measure for a cohort, or study group, of women. However, the most commonly used measures of childbearing are period rates—the ratio of events (births) per years of exposure for a given population in a given time period. The most common period rate is the total fertility rate (TFR), which is an answer to a hypothetical question: If a woman were to experience the age-specific fertility rates of year *x*, she would have *y* children. Put a bit more formally, the TFR is the sum of age-specific birth rates from (usually) age 15 to age 45. With the low levels of mortality that characterize contemporary industrialized countries, a TFR of 2.1 is replacement level fertility—the level that would lead to long-term stability in the size and structure of the population. Contemporary TFR levels vary from highs of 7.5 in poor countries such as Afghanistan and Niger to below 1.25 in places as varied as South Korea and Poland (United Nations, 2007).

Period fertility rates can be calculated for any population; crucial distinctions from a life course perspective are age, parity (i.e., the woman's number of previous births), and marital/union status (hereafter union status). Fertility rates vary dramatically by these characteristics due to their strong links to the proximate determinants of fertility, which are discussed more fully below. Age can index fecundity or normative ages for childbearing; parity greater than zero provides evidence of fecundity and may indicate that preferred family size has been reached and, thus, could be a signal to use contraception or resort to abortion. Union status can indicate one's likelihood of engaging in coitus or becoming pregnant and is often the preferred relationship status for childbearing. In any given year, the distribution of a population across age/parity/marital status will have an impact on its aggregate level of fertility.

The TFR (as the sum of age-specific rates) accounts for any differences in age structure between populations, which might otherwise distort a comparison of fertility rates if one population has more women of childbearing age than the other. The popularity of the TFR follows from this feature, its interpretability, and widely available data for its calculation. Age-specific rates (the components of TFR) can also be examined to determine if one population has an earlier or later pattern of childbearing. Subsequent sections focus on adolescent childbearing and delayed childbearing—the fertility rates of teenagers or those over the age of 30 (or 35), respectively. This focus is justified because of the implications of childbearing at these ages for the individuals and for their social groups (families, communities, and countries).

Fertility rates are frequently decomposed by parity. A common strategy (largely due to data availability) subdivides the numerator of age-specific rates by parity (while leaving the denominator, years at risk, fixed). Thus, one can sum these parity-specific and age-specific rates to create a set of parity-specific TFR rates ($TFR_{i;}i$ = 0, 1, 2, 3+); this set sums to the original TFR. This is useful because changes in fertility can be concentrated at given parities, or stages of family building. For instance, and as discussed below, the fertility transition (changes in birth rates from high to low) is generally caused by the decline in higher parity births. That is, $TFR_0$ and $TFR_1$ change little whereas $TFR_{2+}$ declines dramatically.

Like increasing age and parity, union transitions can have large effects on fertility, but these effects vary greatly by time and place. Preferred measures of childbearing by

union status disaggregate the populations into married and unmarried and then calculate fertility rates as discussed above. Fertility rates for married women are generally much higher than for the unmarried, but this differential varies greatly over historical periods and geographic locations.

## THE PROXIMATE DETERMINANTS OF FERTILITY

The fundamental challenge in fertility research is to understand the factors that produce variation in fertility across individuals and across populations. There are many reasons; some focus on the proximate determinants of fertility. In a classic typology, Kingsley Davis and Judith Blake (1956) identified variation due to the likelihood of coitus, of becoming pregnant, and of carrying a pregnancy to term. John Bongaarts and Robert Potter (1978) elaborated this typology and then traced most subgroup variation in fertility to four key proximate determinants: (a) marriage or the age at which one becomes sexually active; (b) the length of breastfeeding, which is the primary determinant of the anovulatory (suppressed ovulation) period following a birth; (c) the use of contraceptives; and (d) the use of abortion. A huge body of research accounts for group differences by attributing it to these causes.

However, an important critique of this work is that these proximate answers only beg additional questions: If fertility levels vary because of earlier marriage or greater contraceptive use, then what causes early marriage or greater use of contraceptives? The answers lie in the social environment that constrains and enables action—more fundamental determinants. In sum, there is an important distinction in the fertility literature between proximate and more fundamental determinants (or causes). There is far greater agreement about the former than the latter due to the greater challenges of demonstrating fundamental causes.

With respect to the key proximate determinants listed above, the first two can produce vast variation in fertility across groups (Bongaarts & Potter, 1978). For groups in which contraception and abortion are unknown or rare, fertility has been reliably measured as high as 10 births per woman (among the Hutterites, a religious sect that resides on communal farms in the northern United States and western Canada) and as low as 4 births (among the !kung, a nomadic hunter-gatherer society in the Kalahari Desert). The proximate determinants approach shows that the !kung spend considerably more of their fecund years outside a sexual union (due to widespread union disruption) and that women breastfeed for periods as long as three or four years. As a result, the !kung have long intervals between births. With three fecund decades for childbearing, long intervals imply fewer births. The Hutterites, in contrast, marry relatively young, remain married throughout the fecund years, and breastfeed for relatively short periods (Bongaarts & Potter, 1983; Howell 1979).

Research shows that other potential proximate determinants generally do not affect fertility levels across time or space. For instance, poor nutrition and disease do not usually cause differences in fertility among populations, although they clearly cause variation within populations (that is, among individuals). Likewise, the frequency of coitus within sexual unions seems not to vary greatly cross-culturally. Age at menarche (i.e., the onset of menstrual periods) does vary across populations and eras, but childbearing at these young ages is rare and thus negates its potential influence on the population level. Age at menopause varies little across populations (Bongaarts & Potter, 1983).

In populations in which birth control (i.e., contraception and abortion) is widely used, these become proximate determinants of overwhelming importance. The acceptability of various contraceptive strategies or techniques (hereafter techniques) varies sharply across populations, and the theoretical and use effectiveness of strategies vary. Theoretical effectiveness, the reduction in fecundity if the technique is properly used, is fixed for a given technique (i.e., for the pill or condom); but use effectiveness (the fecundity reduction achieved in practice) can vary in a population. Condoms have high theoretical effectiveness, but use effectiveness varies because the appropriate regimen (always using them) is sometimes not practiced.

Other important sets of proximate determinants have proven useful in place of those mentioned above or to supplement them. Perhaps the most important is the number of children a woman (or couple) intends to have. Fertility intentions, or the number of children one plans to have in the future, are relatively stable plans of action; they are the cognitive integration of the factors and forces motivating and constraining childbearing. For instance, less educated women might intend more children because their opportunity costs (in terms of lost wages) are lower than are those for more educated women. Fertility intentions, in turn, can be a primary determinant of proximate behaviors (such as use of contraception). Many fertility analyses focus on fertility intentions and the factors that aid or hinder women (or couples) in realizing intentions.

One aspect of the disjuncture between intentions and fertility behavior are unintended births—both mistimed and unwanted. Mistimed births are those that are unintended at the time of conception, but the respondent reports intentions to have a child or children in the future. Again stressing intentions at the time of conception, unwanted births are those that are not intended

now nor were intended in the future. Unintended births can result from contraceptive failure or from nonuse of contraception. The latter is related to the important concept of unmet need for contraception. The proportion of sexually active women who do not intend additional children and are not using contraception represent the percentage of women whose need for contraception is unmet. Reducing unintended births and lowering unmet contraception needs are frequent foci of public policy.

## WORLD FERTILITY TRENDS AND PATTERNS

Historically, fertility trends are generally couched within the demographic transition framework. Simply stated, the demographic transition is the process of change from high rates of fertility and mortality to low rates. In historical experience, mortality (i.e., the death rate) tends to decline sooner and faster than does fertility, producing a sharp divergence in vital rates—a period with high fertility and low mortality. Thus, the process of demographic transition includes a period of rapid population growth (when vital rates are not in equilibrium).

Much theoretical and empirical work has focused on the demographic transition. Some work has described fertility trends or the trends in proximate determinants that produce the fertility change. As noted earlier, empirical work shows that declines in higher parity births primarily produce the fertility transition. A prototypical case is Taiwan, where Griffith Feeney (1991) showed the fertility transition resulted entirely from declines in births to women with two or more children. Other work has described context-specific mixes of proximate determinants that produce relatively slow or more rapid declines in fertility. Slower declines, for instance, can be produced by increasing contraceptive use that is partly offset by declining duration of breastfeeding; more rapid declines can be produced by simultaneously increasing age at marriage and decreasing the proportion of high parity births.

The more fundamental causes of fertility change have received the greatest attention. Major arguments have stressed cultural/social change, economic change, policy interventions, and other demographic change. Cultural and social change arguments stress the acceptability of fertility control and changes in the importance of children or large families; economic arguments focus on the increasing costs of children due to a changed economic environment, such as a shift from agrarian, or extractive, to manufacturing or service economies. Policy interventions occasionally play a crucial role (e.g., China's one child policy) but more frequently have only a contributing role. Some argue that declining mortality, resulting from improved living standards or public health efforts (such as those that provide clean water or medical care), has decreased the demand for large families. Specifically, families' fertility desires reflect their wish for *living* children. In periods of high infant and child mortality, individuals need a greater number of births to ensure that the number of surviving children meshes with their initial preference.

Empirical work provides some evidence for all of these claims but demonstrates that when fertility declines take place, various economic and demographic regimes can exist. In Ansley Coale's 1973 classic formulation, fertility declines (a) when control of fertility is legitimate, (b) when individuals are motivated to have fewer children, and (c) when effective contraceptive strategies are available. These preconditions in a population can be attained in a variety of ways and can be encouraged or impeded by a number of factors. Thus, the demographic transition is part of multifaceted social change, including social, economic, demographic, and policy changes. No society develops economically without experiencing the demographic transition; however, the social history of transitions is highly variable in the timing of transition vis-à-vis economic change or in the import of policy interventions. The most attractive explanations focus on changes in (a) the way people live, including increases in education, nonagricultural jobs, and female employment; and (b) how individuals interpret the world around them—what they believe is reasonable, moral, or acceptable.

## FERTILITY RATE STATISTICS

Table 1 shows the number (and percentage) of countries by the level and trend in their total fertility rate. Column 1 shows that only 13 countries (7%) have high fertility rates and little evidence of substantial declines over the past 25 years. All but two of these countries are in Africa (Timor and Afghanistan are the exceptions), and all of them are characterized by low levels of socioeconomic development. A larger second set (see Column 2) also have high fertility (mean TFR of 5.1) but show clear evidence of decline—these countries exhibit an average decline of 1.7 births over the past quarter century. These countries are in the earlier stages of the demographic transition.

The third column contains the largest number of countries (77); these countries are in the midst of the demographic transition and show large declines over the past 25 years (average declines of 2.8 births). This tabulation is largely consistent with a global transition toward low levels of fertility—a few countries have yet to begin, some show clear evidence of decline, and a third set is rapidly approaching replacement level fertility. Some

**Total Fertility Rate Levels and Trends**

| Countries of World | (1) High - Modest Declines* TFR ≥ 4.0 | (2) High - Substantial Declines^ TFR > 4.0 | (3) Moderate - Mid-Transition 2.1< TFR < 4.0 | (4) Low Post-Transition 1.5< TFR < 2.1 | (5) Very Low Post-Transition TFR < 1.5 |
|---|---|---|---|---|---|
| Number (= 195) | 13 | 37 | 77 | 37 | 31 |
| Percent (= 100) | 7% | 19% | 39% | 19% | 16% |
| Mean TRF | 6.8 | 5.1 | 2.9 | 1.8 | 1.3 |
| 25-year change | -0.2 | -1.7 | -2.8 | -1.3 | -1.1 |

*Rates have declined less than one birth in last 25 years.
^Rates have declined by more than one birth in last 25 years.

SOURCE: Table A.15. UN, 2007.

***Table 1.*** *Countries of the world categorized by 2000–05 total fertility rate levels and trends.* CENGAGE LEARNING, GALE.

interesting questions remain: Will some countries fail to move through the demographic transition? Will the decline of some countries' fertility rates stabilize well above replacement? Only the future can answer these questions, but most demographers would predict *no* to both questions—the transition will be global and the endpoint will be low fertility.

The last two columns of Table 1 show countries that have already completed the demographic transition—the decline of fertility to low levels and, for 31 counties, declines to very low levels. Very low fertility is now reported from a broad array of countries, including South Korea, Japan, Poland, Romania, Italy, Germany, and, according to some sources, China. These fertility levels have raised country-level concerns about both population aging and eventual population decline. Furthermore, as S. Philip Morgan (2003) pointed out, the spread of very low fertility raises the question of whether below-replacement fertility will become a global concern during the 21st century.

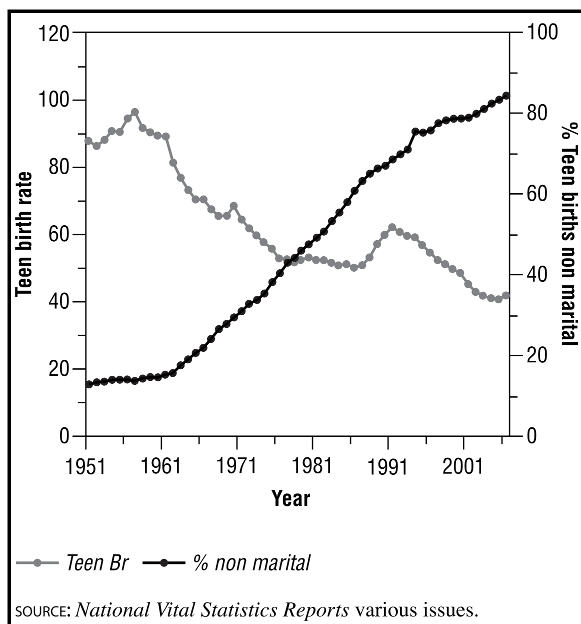
## ADOLESCENT CHILDBEARING

A focus on adolescent (or teen) childbearing returns the life course perspective to center stage. By definition, teen childbearing occurs relatively early in the life course. Thus, key questions focus on the timing of childbearing vis-à-vis a woman's physical maturity to bear, and her emotional maturity and general resources to rear, a child. Whether teenage childbearing is problematic for mother and child depends on the social setting, including the helpmates available to rear the child and the human capital the child needs to become successful. Frank Furstenberg, Jeanne Brooks-Gunn, and S. Philip Morgan (1987) argued that teenage childbearing in the United States became a major social concern in the 1970s.

Figure 1 shows that this was a period when teen childbearing was actually declining. Heightened concerns were the result of the changing context of teen childbearing, not its increase. First, the human capital demands of the labor force were growing, thus increasing the importance of schooling. Young women were encouraged to postpone childbearing and stay in school to acquire an education and skills that were important for their economic well-being. Increased education also produced more skilled mothers who were deemed important for rearing a future generation of productive citizens. The second major change, also shown in Figure 1, was the increased proportion of teen childbearing that was nonmarital—suggesting the absence of a male helpmate to care and provide for children.

For reasons noted above, adolescent childbearing is considered problematic in industrial and post-industrial society. The attention it receives is linked to its prevalence; generally, its frequency declined in the last two decades of the 20th century and early in the 21st century but varies greatly across societies. In the 1970s, 1980s, and early 1990s the United States stood out as having one of the highest rates of teen childbearing among industrialized countries (Alan Guttmacher Institute, 2002; Jones et al., 1985). This distinction remains, although U.S. teenage birth rates declined substantially in the 1995 to 2005 period. Figure 1 shows the U.S. teen childbearing rate from 1950 to 2005. Overall, the rate declined during this period (although there was an upturn from 1985 to 2001).

In terms of proximate determinants, the high U.S. teen childbearing rate compared to similar countries (e.g., Canada, Great Britain, France, and Sweden) is not due to an earlier age at first intercourse or to a higher frequency of sexual activity. Rather it results from lower levels of




SOURCE: *National Vital Statistics Reports* various issues.

***Figure 1.*** *Trends in teen birth rate and in the percentage of teen births that are nonmarital.* CENGAGE LEARNING, GALE.

contraceptive use and use of less effective contraceptives. In terms of more fundamental causes, these higher rates and the role of these proximate causes can be traced to negative societal attitudes toward teenage sexual relationships. These attitudes, in turn, inhibit access and increase the costs of reproductive health services, and they increase the ambivalence of parents and teens toward contraceptive use by teens. Also, dramatic inequality of opportunity can erode motivation to delay parenthood or to avoid unintended pregnancy. For young women with few promising prospects for education or careers, the potentially detrimental effect of early childbearing may not be considered all that serious (see Alan Guttmacher Institute, 2002; Jones et al., 1985). Recent declines in U.S. teen fertility (1995–2005) have occurred among Whites, Blacks, and Hispanics and have been accompanied by declines in abortions. Thus, there is evidence that increased abstinence and more effective use of contraceptives have both contributed to these sharp declines. The more fundamental causes of this decline remain an unanswered question and an active research area.

The consequences of teen childbearing have been the focus of much research and debate. The dominant view of the 1960s and 1970s is captured by Arthur Campbell's (1968) often quoted statement: "The girl who has an illegitimate child at the age of 16 has 90% of her life's script written. . . . Her life choices are few. And most of them are bad"(p. 238). Purported repercussions of teen childbearing include truncated schooling, poor job opportunities, more rapid subsequent childbearing, larger completed family size, and few good marriage opportunities. Evidence that teen mothers fared poorly on these dimensions was widespread. Further, "children bearing children" was widely posited as a key mechanism perpetuating poverty and disadvantage.

However, a critique of this view emerged that positioned teen childbearing in a broader context. Specifically, the critique pointed out that those who bore children as teenagers were disadvantaged prior to the birth; they had limitations or constraints that made their educational/economic/marital success less likely (than for others) even if they had postponed childbearing. Thus, their relatively poorer outcomes were due, at least in part and perhaps in their entirety, to these preexisting characteristics. Evidence for this view is impressive and rests on several clever research designs.

One design by Saul Hoffman, E. Michael Foster, and Frank Furstenberg, Jr. in 1993 compared sisters, one having an early birth and one not. This strategy controls for many family characteristics and aspects of the home environment that are shared by the sisters. The effects of teen childbearing estimated from this design are sharply attenuated, compared to the effects detected using more naive research designs. A second strategy by V. Joseph Hotz, Susan Williams McElroy, and Seth Sanders in 2005 used the occurrence of a spontaneous miscarriage as an event or "treatment" that postponed childbearing for a random sample of women. As in the sisters design, effects estimated using this strategy suggest modest impacts of teenage childbearing on many purported consequences. This research places a teen birth in the context of the life course—an important event but one closely connected with prior experience and contributing to subsequent events. In sum, teen childbearing is not nearly as determinative as was often assumed in the 1960s and 1970s.

## DELAYED CHILDBEARING

Contrasting delayed childbearing with early (adolescent or teen) childbearing is useful. Clearly delayed childbearing is normative if compared to teen childbearing. Postponing parenthood until one has the physical and emotional maturity to parent well, has established a reasonable level of economic security, and has entered a stable union are frequent normative preconditions for parenthood. That is, social norms encourage that childbearing be timed appropriately and placed in proper sequence in the unfolding life course. Appropriate timing and sequencing are justified by their advantages for the child, mother, and family.

The most common measure of delayed childbearing is change in the mean (or average) age of first births across time periods (or across groups of women defined by

successively more recent birth years, i.e., birth cohorts). The 1990s and early 2000s showed remarkably pervasive and consistent increases in the postponement of first births. In many places mean age at first birth has risen by one to two years per decade since the 1980s.

The most proximate determinants for this change are clear: Contraception and abortion are used to postpone childbearing. Women (or their partners) use these techniques to fit their children into a changing life course that includes longer periods of schooling, less secure employment, postponement of marriage, and increased longevity. The process is best characterized by a sequence of decisions to "not have a child now," to allow for greater economic security (a better or more secure job), to accumulate more wealth (e.g., to buy a home), or to build a more secure relationship with a partner. These postponements can be a process that changes goals and intentions. For instance, an interesting career may emerge, and its pursuit may lead to further postponement or a decision to forego childbearing. Postponement allows for the possibility of a union disruption prior to childbearing, and the absence of a partner may lead a woman to postpone or forego childbearing.

The more distal causes are fundamental social and economic changes that have altered the life course centrality of parenthood and the sequencing and duration of other aspects of the life course. Broadly, perceptions of appropriate and advantageous behavior have changed, as have the structural aspects of adolescence and adulthood. Central structural changes have included a declining proportion of manufacturing jobs and increasing proportions of service and white-collar jobs. This shift places a premium on education and training and produces job niches that include many women. The expansion of women's education, now surpassing men's in many places, and the increase in female employment have provided legitimate alternatives to early marriage and the economic independence to realize them. Ideologies that stress the importance of self-actualization and independence encourage a lengthened life course stage for training, experimentation, and emotional maturity. These changes led Ronald Rindfuss (1991) to characterize contemporary late adolescence and early adulthood as a "disorganized" life course period—normative and structural constraints on the transitions from schooling, to work, to marriage, to parenthood have lost their force. As a result, the timing, sequencing, and duration of these events or activities have become uncertain and highly variable.

Although fertility delay is advantageous and normative, repeated delay can have adverse consequences for individuals and populations. For individuals, repeated postponement can lead to unintended childlessness or to smaller than desired family size because of the diminished fecundity that accompanies aging. Repeated fertility postponement can mean that women may try to have a first child at 30, 35, or even 40 years of age. However, fecundity declines with age, with periods of subfecundity (i.e., reduced capacity to reproduce) generally preceding infecundity. Subfecundity does not preclude childbearing but on average increases substantially the time to pregnancy and/or live birth. Precise estimates are not available, but the percentage of women infecund is low at age 20 (perhaps 2 to 3%); this percentage doubles approximately every 5 years.

Thus, at age 40, many women (perhaps one third) are infecund and many more are subfecund (compared to a decade before); by age 50 nearly all women are infecund. Thus, simulations show that some family-building strategies are difficult—for example, a woman marrying at age 35 or 40 and having two children. A substantial proportion of women with such goals will not be successful because they will become infecund before having the second child (see Bongaarts & Potter, 1983, chapter 8). As Sylvia Hewlett (2002) pointed out, some who are unable to realize their strong desire for children may face huge disappointment , which leads them to seek expensive and invasive treatments for infertility. Childbearing at later ages can also carry new and unique risks; some infertility treatments increase dramatically the likelihood of multiple births and associated complications.

At the aggregate level, the increased demand for infertility treatments and the different set of risks experienced by older mothers and their children have consequences for medical provision. Also, later fertility for a birth cohort is strongly associated with lower fertility—"later" translates as "fewer" in the aggregate according to Hans-Peter Kohler, Francesco Billari, and José Antonio Ortega (2002). So to the extent that low fertility in a population is seen as problematic, fertility postponement is clearly part of the problem. Finally, even if women are able to postpone childbearing *and* have all the children they want, Bongaarts and Feeney (1998) pointed out that postponement lowers fertility levels in the current period. A useful way to think about this is that when births are postponed, they are pushed into a subsequent time period. The TFR combines this timing effect with any possible change in the number of births. The implication of this is that when ages at childbearing are increasing, the TFR (as an indicator of long-term or completed fertility) is biased downward. For many countries, Tomás Sobotka (2004) noted, this bias accounts for up to one third of the difference between observed and replacement level fertility (i.e., one third of the difference between 1.5 and 2.1 equals .2 of a birth).

## MARITAL AND NONMARITAL CHILDBEARING

The focus on the marital status of the mother (or the legitimate/illegitimate status of the child) has long cultural, legal, and intellectual roots. Details can vary, but cultures have often linked marriage with socially sanctioned sexual intercourse; that is, marriage legitimated sexual intercourse between a husband and wife. In some social contexts the discovery of illicit (premarital or extramarital) intercourse, or even credible rumors of it, could result in strong sanctions, especially for women. Clearly chastity until marriage and sexual exclusivity in marriage would guarantee men of the paternity of their wife's children; paternity in turn linked a man to an identifiable number of children to whom he had rights and obligations. These norms often coexisted with inheritance laws that specified that only children born within marriage were legal (or legitimate) heirs to family rights and property. This recurring attention to offspring legitimacy is reflected in various theoretical attempts to explain its historical and geographic reach by authors such as Bronislaw Malinowski (1964) and Randall Collins (1975).

Twenty-first century attention to marital/nonmarital childbearing has important differences and similarities to this legacy. Differences include the availability of genetic paternity tests that can take the place of marriage in linking men to their progeny. However, as in the past, these links are desired so that responsibility for the support and care of children can be assigned. Other differences include a reduced importance of father's status in determining children's status in contemporary contexts, because contemporary societies are less patriarchal, and status is more often achieved rather than ascribed. Most important, studies, such as those done by Sara McLanahan and Christine Percheski (in press), show residence in a family with both biological parents remains a strong predictor of children's well-being and later life success.

Measurement of marital/nonmarital childbearing is not as straightforward as it might seem. First, there is an issue of the timing and sequencing of the marriage vis-à-vis the conception and the birth. In many contexts, norms specify that marriage precede sexual intercourse and conception. However, in some times/places these norms are frequently violated. They may not produce nonmarital births because premarital conceptions may be "legitimated" by marriage after conception but prior to the birth (these marriages are often in the first three or four months of pregnancy); the prevalence of legitimation varies by social groups and across time (see Parnell, Swicegood, & Stevens, 1994, for U.S. trends and differences). In the United States a birth is considered marital if the mother was married at the birth of the child or at anytime during the pregnancy.

A second definitional issue is posed by marriage—when is someone married? Contemporary definitions of nonmarital births include births to long-term cohabiting couples even if they subsequently marry. Such long-term cohabiters provide the stable family environment thought to advantage children. To the extent that the distinction between cohabiting and marital unions fade, the distinction between marital and nonmarital births should become less important. Such definitional issues must be kept in mind when interpreting data on nonmarital births.

With the above cautions in mind, there are two common measures of nonmarital childbearing: The first is the nonmarital birth rate, and the second is the nonmarital birth ratio (or the percentage of all births that are nonmarital). The first measure treats unmarried women as a separate population and estimates their number of births (*b*) divided by an estimate of risk (the population of unmarried women [*w*]). This statistic measures the likelihood that an unmarried woman will have a birth. The second measure, the nonmarital ratio, indicates the proportion of children born in a particular year to unmarried mothers.

In the United States the nonmarital ratio has increased steadily over the past several decades: from 5.3, to 14.3, to 28.0, to 36.9 in 1960, 1975, 1990, and 2005, respectively, according to Stephanie Ventura and Christine Bachrach (2000) and Joyce Martin and colleagues (2007). In 1996 Herbert Smith, S. Philip Morgan, and Tanya Koropeckyj-Cox indicated that the reason for this increase is that the nonmarital ratio has four distinct components: the number of women in the (a) married and (b) unmarried populations and the birth rates for (c) married and (d) unmarried women. Again in the U.S. context, the most important of these factors is the increasing number of unmarried women (and a relative decline in the married). In effect, the postponement of marriage among Whites and the decline of marriage at all ages among Blacks has put more women in the unmarried category and thus at risk of a nonmarital birth. Of secondary importance, an increasing birth rate among unmarried White women (but not Blacks) has contributed to this trend. For both racial groups a decline in the rate of marital childbearing plays a tertiary but significant role.

## ADDITIONAL FERTILITY DIFFERENTIALS

Other fertility differences have and continue to attract research attention. The nature of these differences varies over time and place. Four important differences became the focus of U.S. research beginning in the late 20th century.

Fertility differences by education are frequently examined; a common finding is modestly higher fertility for the less educated. A life course perspective helps account for these differences. In the contemporary United States, for example, most young women intend to have small families. Those who do well in school and have high aspirations tend to remain in school and postpone childbearing. Following their investments in higher education, they pursue jobs that have career ladders, which can produce further postponement of childbearing. Thus, those attaining high levels of education are more likely to follow the pattern of delayed childbearing. This results in later and less childbearing. In contrast, those doing poorly in school are less likely to continue their education and are more likely to take jobs seen as less rewarding. These women are also more likely to bear their children early and to have more of them. As noted by some researchers (Rindfuss, Morgan, & Offutt, 1996), the most striking differences by education are in fertility timing with differences in number of children relatively modest.

Racial or ethnic differences receive considerable attention. A first level of explanation is to see if the different socioeconomic standing of the racial or ethnic group accounts for the differences. For instance, does one group have higher poverty or lower educational attainment than another (perhaps due to past or current discrimination)? Such differences are often part of the explanation for overall differences. However, if differences persist after these comparisons, then hypotheses of "minority status" may be employed. The role of minority status depends on the historical context of the race/ethnic group. In a classic formulation, Calvin Goldscheider and Peter Uhlenberg (1969) argued that Jews in the United States reduced their fertility to invest in the education of their children because upward mobility was possible. In contrast, Blacks in the United States faced harsher discrimination such that upward mobility was less promising, and, as a result, fertility limitation was less attractive. Further, in contexts in which racial/ethnic tensions are also political, higher fertility may be encouraged as a means to strengthen the minority group politically.

Differences in fertility by immigrant status are frequently observed; for instance, in the contemporary United States, immigrant Hispanics, especially Mexican immigrants, have higher fertility than do non-Hispanic Whites or Blacks. Assimilation models commonly are invoked to account for these differences. In short, assimilation models posit declining differences across generations as the immigrant group is incorporated into the economic and social fabric of the receiving country. As a result, convergence in behavior is expected in a broad range of behaviors, including speaking the host country language, attaining similar levels of education, and adopting similar marriage and fertility behavior. This assimilation model explains well the fertility and socioeconomic convergence of European immigrant groups and U.S. natives across the 20th century. Further, when data are appropriately examined, Emilio Parrado and S. Philip Morgan (in press) found evidence that Hispanic/non-Hispanic fertility convergence exists. Nevertheless, some authors, such as Douglas Massey (1995), have questioned whether this model is appropriate for the 21st century flow of Hispanic immigrants and suggested that a continuing influx of immigrants into segregated areas will retard socioeconomic integration and assimilation.

Religious differences may be overlaid on group differences in socioeconomic standing, racial/ethnic composition, and in some cases immigrant status. In their work in 2007, Charles Westoff and Tomas Frejka used the example of Muslim immigrants in Europe and found evidence of all of these factors. In such cases isolating socioeconomic, racial/ethnic, and religious differences can be difficult, impossible, or even inappropriate; these factors can combine in powerful, but historically unique, ways. For instance, different family behaviors (including fertility) may take on significance as markers of identity, for instance in South Asia (Morgan et al., 2002) or India (Dharmaligham & Morgan, 2004). Similarly, in some contexts substantial religious differences persist among groups that are not disadvantaged or identifiable as another race. These differences highlight the importance of religion for maintaining a set of ideas (or an interpretive frame) that privileges certain lifestyles.

In the United States in the 21st century, for instance, primary religious differences are not by denomination (i.e., Protestant versus Catholic) but by measures of intensity of religious belief (i.e., respondents' reports of the "importance of religion in their life"). Those reporting religion as "very important" (as opposed to "not important") have a TFR .5 higher (2.3 versus 1.8). In terms of proximate determinants, this difference can be traced to intentions for larger families among the more religious. Further, this intent to have more children is embedded in a set of ideas that privilege marriage, family, and traditional views of family life. Consistent with this evidence, Ron Lesthaeghe and Lisa Neidert (2006) showed strong state- and county-level associations among levels and timing of fertility, cohabitation and marriage, and political indicators such as the percentage voting for George W. Bush in the 2000 and 2004 presidential elections. They argued that the density of secular versus religious orientations across U.S. states and counties explain these aggregate associations.

## FUTURE RESEARCH DIRECTIONS AND ISSUES

In the future, researchers of childbearing will continue to wrestle with all these issues, but important new questions lie ahead as well. Three deserve mention here.

## PRONATALIST POLICIES

A growing number of industrialized countries have fertility rates substantially below replacement levels. This low fertility produces aging populations that increase government expenditures for old age financial support and health care. In the long run, very low fertility produces dramatic population decline. One policy response would aim to increase fertility. A major reason for low fertility is fertility postponement due to the competing demands in young adults' life courses. An appropriate intervention would provide high quality, affordable, and widely available daycare, which would allow women to work outside the home or pursue other activities while beginning a family.

Data from Norway (Rindfuss, Guilkey, Morgan, Kravdal, & Guzzo, 2007) showed that state-subsidized childcare reduces age at first birth. However, these effects depend on the systematic placement of daycare centers. Specifically, these centers open in locales where the tension between work and family is greatest (and where fertility is initially lowest). Once daycare placement is completed, the expected pronatalist effects are apparent.

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First, is the proliferation of very low fertility inevitable? Will its global spread be pervasive? In 2000 to 2005, 31 (17%) had TFR rates below 1.5; another 37 (19%) had below replacement level rates (a TFR $< 2.1$; see Table 1). These low fertility countries are not confined to one or two geographical regions, nor do they share cultural/historical similarities. Below-replacement fertility exists in China, Japan, South Korea, virtually all of Europe (East and West), Australia, and North America—with the United States above or below replacement depending on the year examined (see Morgan & Taylor, 2006).

This low fertility seems not to be a rejection of children or parenthood but instead is closely linked to delayed childbearing. In industrialized countries men and women intend to have small families (usually a stated intention for two children), but education, careers, leisure pursuits, and economic insecurity conspire to produce a long sequence of postponements. Although many achieve the two children they intend, falling short of this goal is more common than exceeding it. Thus, couples are having fewer children than they intended and fewer than their societies require for long-term population stability. The sidebar discusses possible policy interventions. However, a number of countries are well into their third decade of very low fertility—a low fertility crisis has arrived for these societies. How widespread will low fertility become, and how responsive will it be to pronatalist policy?

A second important question focuses on the role of men in fertility and parenting behavior. Fertility research has focused primarily on women. Some attention is shifting toward men, but some of this new work focuses on the fertility of men and largely ignores women. Instead, what is needed is a focus on the fertility of both married and unmarried couples. Such a focus is challenging because it requires longitudinal life course analysis of both partners. Further, in many contexts, this analysis must include the multiple partnerships that are part of many women's and men's life courses. The previous unions and childbearing of women and men have implications for their subsequent unions and fertility decisions. Early 21st century research on "multipartnered fertility" and "blended families" has begun to address such issues.

Finally, what are the likely impacts of recent and emerging reproductive technology? In general, new technology will be adopted if its use is considered moral and acceptable and if people are motivated to use it. Over the long term, technological advances have increased control over fertility—some methods reduce the likelihood of pregnancy and childbearing whereas others increase the chances. Active debates focus on whether and which methods are considered moral or acceptable. These debates have an impact on the social and political environment in which new technology is developed and deployed. For instance, will the morning-after-pill become more widely available and acceptable? Will assisted reproductive technology (ART) become less expensive?

The fecundity reductions associated with delayed childbearing are increasing the demand for ART. In 2004 the Centers for Disease Control and Prevention reported that more than 45,000 births (more than 1% of

all births) resulted from ART. Screening these embryos for healthy genetic predispositions or for their gender (daughters or sons) is possible and will become increasingly affordable and thus will reduce obstacles to their use. Pregnancy and childbirth may be transformed as well; Fay Menacker (2005) noted that cesarean delivery is becoming more common in cases in which it is not a medical necessity. Such changes could fundamentally alter the costs, constraints, and patterns of future childbearing.

**SEE ALSO** Volume 1: *Breastfeeding; Transition to Parenthood;* Volume 2: *Abortion; Birth Control; Childlessness; Cohabitation; Fatherhood; Infertility; Marriage; Maternal Mortality; Motherhood; Sexual Activity, Adulthood;* Volume 3: *Demographic Transition Theories.*

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# CHILDLESSNESS

In general, the term *childless* is used to describe adults who have never had biological or adopted children, and the term *childlessness* is used to refer to this state. These general terms, however, encompass several distinct groups: people who want children but are biologically unable to have them, people who have made a voluntary choice never to have children, people who are postponing parenthood until later in their adulthood, and people who have outlived their children, who are sometimes called "functionally childless" (Dykstra and Wagner, 2007; Rowland, 2007). Researchers who study childbearing and parenthood usually conceptualize childlessness as a lifetime, permanent condition. From this perspective, only members of the first two groups are childless. Although members of the latter two groups are childless in a broad sense (they currently have no living children), they may become parents in the future or they were parents in the past.

The *involuntary childless* are a group of men and women who want and intend to become parents but whose ability (or partner's ability) to reproduce is constrained (biologically or socially) and who have not become parents through other means (e.g., surrogacy, egg or sperm donor, adoption). Note that the label "involuntary" is not necessarily clear-cut. For example, persons unable to conceive and/or maintain a pregnancy can at times become parents by opting for biomedical interventions and/or legal processes (adoption). The decision to parent *exists* for them, but they *choose* to forgo parenthood. From another perspective, however, the inability to reproduce is not a choice, especially if people consider "natural" biological childbearing the only acceptable route into parenthood. With respect to social constraints, some people may want to have children but are selected out of the pool of potential mates because of institutionalization (e.g., incarceration), compromised physical or mental health, or lack of self-sufficiency (e.g., unemployed, living with parents, homeless). Although these people may intend to form romantic relationships and have children (with no known biological constraints), their limited ability to marry and work results in social constraints against having children (e.g., remaining unmarried, not qualifying for adoption). The key issue is that people who are involuntarily childless may differ in their fertility intentions and behaviors.

In contrast, *voluntary childlessness* defines a group of women and men who have not become parents either because they made a conscious decision not to have children or made other decisions in life that postponed parenthood repeatedly and, eventually, permanently. The topic of voluntary childlessness thus highlights the question of whether and when people make decisions about childbearing. Many voluntarily childless adults report that they made their decision to be childless during adolescence or childhood (Veevers, 1980). In contrast to people who actively decided early or late in their lives to remain childless are people who become childless by repeatedly postponing childbearing and eventually end their reproductive lives without having had children. The latter type of childlessness unfolds as a series of more or less passive decisions often based on other aspects of the life course, for example timing (e.g., not now) or events (e.g., after I am married). Thus the voluntarily childless is composed of three groups: early deciders, late deciders, and perpetual postponers (Dariotis, 2005). Taking into account this heterogeneity is central to understanding voluntary childlessness because the decision process differs among these types. Note also that the perpetual postponers may be difficult to identify early in the life course because they have not yet made the "decision" to not bear children.

## IMPLICATIONS OF CHILDLESSNESS FOR SOCIETIES AND INDIVIDUALS

To continue its existence, a society needs its members to reproduce themselves. This is true not only because new births replace people who have died, maintaining the size of the population, but because societies rely on younger members for certain tasks, for example financially and physically supporting the aged. Because reproduction is essential to societies' survival, societies developed norms, customs and beliefs that, to varying degrees, encouraged and regulated parenthood (for example, by discouraging births outside of marriage or marriagelike unions) and discouraged and stigmatized childlessness (for example, endorsing the motherhood mandate by which every woman was expected to have children as a sign of her womanhood). Some argue that vestiges of pronatalist norms sanction the childless, especially the voluntarily childless, who are viewed as selfish and immature.

Permanent childlessness challenges these societal needs and the pronatalist norms surrounding them. The extent to which they do so, however, depends on the demographic situation of the society. Prior to the widespread use of fertility control, most childlessness was involuntary and the main obstacle to maintaining the size of the population was mortality. Only once mortality rates declined and the use of birth control became widespread could low fertility levels, resulting from both smaller family sizes and increases in voluntary childlessness, be viewed as a threat to a society's continuation. Demographers define "replacement level" fertility as the average number of children women will need to bear in their lifetimes to maintain the size of a population. This number is around 2.1 children per woman. Currently, a number of nations in the developed world are experiencing or approaching below-replacement fertility. For example, between 1995 and 2000 Italian fertility rates were 1.2 children per woman; for Spain and Greece the rates were 1.16 and 1.3, respectively (Morgan and Hagewen, 2005). Although the ultimate concern about low fertility is whether these societies can continue in their present form, the more urgent concern is that low fertility results in an aging population, which in turn raises a host of social, economic and political challenges.

Childlessness has implications for the individual life course as well. Historically (and in many contemporary developing nations), the transition to parenthood marked a rite of passage into adulthood. In modern societies the importance of childbearing as a marker of adulthood has diminished, and the fraction of the life course spent as a parent to minor children is lower (especially with smaller family sizes and longer average lifespan). Nevertheless, the majority of individuals become parents, and the childless need to rely on other transitions to mark their adult status (e.g., self-sufficiency, marriage).

People who are childless may experience different life courses than those in the parent majority. First, people who are childless do not experience the financial and opportunity costs of parenthood. To the extent that they have other resources—temporal, financial, and human—voluntarily childless people may devote these resources to other activities, such as careers, education, charitable causes, or personal development. In fact, the prevalence of permanent childlessness has increased in part because alternatives to parenthood have emerged in modern societies (e.g., careers, educational attainment, self-actualization) and because norms supporting individualized life choices support these alternatives. For other people, not having the financial and time resources (for whatever reason—e.g., poverty, low-paying career choice) to raise children according to societal standards is a motive not to have children.

Second, Heaton, Jacobson, and Holland (1999) found that the decision to have children corresponds with the decision to marry. In other words, voluntarily childless people feel less compelled to marry or to marry during their childbearing years. As a result, they may spend more (or all) of their adult years unmarried. Given that marriage confers health and social benefits to men, this may mean that never-married childless men will experience greater health disparities relative to their married parent counterparts. The extent to which observed disparities are attributable to childlessness per se, to the lack of marriage per se, or to individual characteristics (e.g., low education, unemployment), however, remains to be determined.

Most childless adults are well adjusted and do not report elevated negative mental health outcomes. As Dykstra and Hagestad (2007) report, childless older adults are not "a sad bunch," contrary to popular stereotypes. For example, they found that childless never-married women evidence greater advantages to their female and male parent counterparts in terms of socioeconomic status, educational attainment, and other factors.

## TRENDS IN VOLUNTARY AND INVOLUNTARY CHILDLESSNESS

Rates of childlessness in most developing nations are relatively low because of low levels of contraceptive use and large family size norms. Childlessness that does occur in developing nations mostly results from malnutrition, disease-induced sterility, early widowhood, and never marrying. Developed nations have a higher prevalence of childlessness because of widespread use of contraceptive and lower family size norms. In addition, alternatives to childbearing are more pervasive as well as the norms of individualism that make these alternatives viable choices.

In the United States at the turn of the 20th century, childlessness resulted equally from infecundity/sterility and voluntary intentions (Morgan, 1991). Over the second half of the 20th century, this proportion shifted such that two-thirds of childlessness was attributable to personal choice and one-third to infecundity (Houseknecht, 1987; Morgan, 1991; Poston and Trent, 1982; Rowland, 2007). Better nutrition, general medical advances, and new treatments for infertility meant that infecundity was no longer the primary determinant of childlessness. In the early 21st century only 3% of couples experience infecundity (Rowland, 2007). Whereas the incidence of involuntary childlessness declined over time, the incidence of voluntary childlessness increased and accounts for a greater proportion of total childlessness (Houseknecht, 1987). Intentionality, personal choice, life course preferences, and postponed marriage coupled with increased reliance on birth control and voluntary sterility

| Characteristic | Number of women | Percent childless |
|---|---|---|
| **AGE** | | |
| Total | 61,588 | 44.6 |
| 15 to 19 years | 9,964 | 93.3 |
| 20 to 24 years | 10,068 | 68.89 |
| 25 to 29 years | 9,498 | 44.2 |
| 30 to 34 years | 10,082 | 27.6 |
| 35 to 39 years | 10,442 | 19.6 |
| 40 to 44 years | 11,535 | 19.3 |
| **RACE AND HISPANIC ORIGIN** | | |
| White alone | | |
| Total | 47,984 | 45.1 |
| 15 to 19 years | 7,646 | 93.9 |
| 20 to 24 years | 7,790 | 70.8 |
| 25 to 29 years | 7,309 | 45.6 |
| 30 to 34 years | 7,790 | 28.4 |
| 35 to 39 years | 8,212 | 20.2 |
| 40 to 44 years | 9,237 | 19.1 |
| White alone, non-Hispanic | | |
| Total | 39,120 | 47.0 |
| 15 to 19 years | 6,174 | 95.5 |
| 20 to 24 years | 6,252 | 75.4 |
| 25 to 29 years | 5,699 | 49.6 |
| 30 to 34 years | 6,242 | 30.9 |
| 35 to 39 years | 6,784 | 21.3 |
| 40 to 44 years | 7,968 | 20.0 |
| Black alone | | |
| Total | 8,798 | 40.5 |
| 15 to 19 years | 1,571 | 90.4 |
| 20 to 24 years | 1,495 | 57.0 |
| 25 to 29 years | 1,370 | 33.3 |
| 30 to 34 years | 1,408 | 18.9 |
| 35 to 39 years | 1,431 | 17.0 |
| 40 to44 years | 1,523 | 21.3 |
| Asian alone | | |
| Total | 3,035 | 47.2 |
| 15 to 19 years | 383 | 94.7 |
| 20 to 24 years | 443 | 80.8 |
| 25 to 29 years | 549 | 50.4 |
| 30 to 34 years | 595 | 40.0 |
| 35 to 39 years | 559 | 19.0 |
| 40 to 44 years | 505 | 17.8 |
| Hispanic (any race) | | |
| Total | 9,618 | 37.1 |
| 15 to 19 years | 1,588 | 87.9 |
| 20 to 24 years | 1,684 | 52.8 |
| 25 to 29 years | 1,744 | 31.5 |
| 30 to 34 years | 1,700 | 18.6 |
| 35 to 39 years | 1,524 | 15.1 |
| 40 to 44 years | 1,378 | 13.8 |

SOURCE: U.S Census Bureau.
Current Population Survey. June 2004.

***Table 1.*** *Fertility indicators for women 15 to 44 years old by age, race, and Hispanic origin, June 2004.* CENGAGE LEARNING, GALE.

remain the primary mechanisms underlying childlessness. National estimates of childlessness range between 10% and 20% of the population, on average, with Australia, England, Scandinavian nations, and the United States having rapidly increasing rates approaching or exceeding 20% (Rowland, 2007). Cross-national comparisons, however, are plagued by differences in reporting biases and sampling issues (Rowland, 2007).

Depending on the definition of childlessness and the sample used, the proportion of childbearing-aged women in the United States who are voluntarily childless ranges from 6.4% (for married couples studied in the 1980s) to 20% (projections for women born in 1962) (Heaton, Jacobson, and Holland, 1999; Houseknecht, 1987; Rovi, 1994). In a nationally representative sample of adolescents aged 16 to 22 in 2001, 17% reported that they intended to be childless (Dariotis, 2005). The fact that Americans have experienced decreased fertility is well documented, and voluntary childlessness has and continues to play a part in that decline (Bianchi and Casper, 2000; Morgan, 1991; Morgan, 1996; Rindfuss and Brewster, 1996; Teachman, Tedrow, and Crowder, 2000). Although this trend is well evidenced, researchers lack a unified explanation for why the decline has occurred (Hirschman, 1994). Such a unified explanation most likely does not exist because of the heterogeneity of motivations across subgroups of people (discussed below).

## PATHWAYS INTO PERMANENT CHILDLESSNESS

People can become permanently childless *involuntarily* through a number of means. Some people (or their partners) are subfecund (i.e., their ability to reproduce is impaired), which may result from genetic factors, disease-induced sterility due to untreated infections and conditions, and malnutrition. Others may intend to have children, but have difficulty marrying and mating because others perceive them as low-quality mates (e.g., incarcerated, unemployed, or physically unhealthy people). Other people may marry, become widowed before having children, and never remarry.

Similarly, people become childless *voluntarily* by different paths. *Early deciders* (Houseknecht, 1987; Veevers, 1980) make an active decision to forgo parenthood during their mid- to late adolescence. Retrospective, qualitative studies (Veevers, 1980) suggest that early deciders' decisions stemmed from issues in their families-of-origin, most notably parentification, whereby they were expected to assume parenting responsibilities for younger siblings or siblings with a disability. These early deciders claim that they already completed their parenting duties by rearing their siblings, an experience they do not want to relive. Other commonly reported reasons include the fear of being "bad" parents, de-identification with same-sex parents, incompatibility of parenthood with career and leisure preferences, disinclination toward children, and traumatic early life events—such as experiencing parental divorce during youth and attributing it to parental demands and child presence (Houseknecht, 1987; Veevers, 1980).

Some early deciders remark how negative parenthood was for their parents and believe that parenthood destroyed

the quality of their parents' marriages and/or limited their parents' goal achievement. Still others de-identify with the parenting role to prevent "becoming their parents." Hearing negative messages about parenthood and observing parental and marital distress becomes internalized and develops into negative working models of parenthood (e.g., parenthood destroys spousal relations; parenthood precludes freedom and personal growth). These early experiences and rationalizations appear robust and resilient to change (Pol, 1983; Veevers, 1980). Using prospective data, Dariotis (2005) showed that voluntary childless intentions begin in adolescence and that strong predictors included family-of-origin experiences, attitudes toward children, and intentions to remain permanently single.

*Late deciders* make an active decision, during adulthood, not to have children. Late deciders typically attribute this decision to career and lifestyle factors. For instance, late deciders may perceive parenthood and career aspirations as inconsistent/irreconcilable or believe that parenthood does not offer the same satisfaction as independence. Others may fear that parenthood would compromise their relationship with their romantic partner. Additional reasons include partner choice (becoming involved with a partner who does not want to have children or a partner who they believe will not be a good parent), experience with others' children (observing the demands and related consequences of parenthood for their peers), and health (physical and mental health–related problems that lead the person to doubt his or her parenting capabilities). Still others report philosophical reasons not to have children. For example, people who espouse zero population growth and environmental conservationists want to minimize their contribution to the world's population and depletion of natural resources, respectively.

*Perpetual postponers* make a sequence of decisions that "the time is not right" to have children because of career, education, and/or marriage (postponement) outcomes. Eventually, they postpone childbearing until a point in their lives when childbearing is not likely (at ages over 40 women are increasingly less likely to conceive) or childbearing is not preferable. Postponement occurs for many reasons. For instance, late nest-leavers may continue to live with parents into their 30s and 40s because they are caring for aging parents, live at home while building human capital (advanced degrees and prolonged workforce participation), or have difficulty finding stable employment. Later onset of independent living and prolonged time pursuing educational and career goals has a ripple effect whereby marriage or stable cohabiting union establishment is postponed. Late union formation, in turn, postpones childbearing. Relationship disruption, via divorce or break-up, perpetuates the ripple effect; it takes time to find another suitable partner, establish a relationship, and consider having children. "Timing out" of the fecund years for women is a product of when they leave home, finish their education, spend enough time establishing a foothold in the workforce, find a mate, stabilize a relationship, and whether the relationship ends prior to having children.

**Encouraged Childlessness—a Special Case** Yet another group of voluntarily childless individuals are people who experience pressure from family, friends, partners, and health care providers not to have children because of debilitating and/or transmittable conditions (e.g., HIV/AIDS). Even with antiretroviral medications that reduce the chance of disease transference to offspring, HIV-positive women (and men) worry about their own longevity and ability to manage the physical and emotional strains of parenthood. People who suffer from genetic-related conditions (e.g., psychological and/or physical) consider the potential of passing these conditions onto the next generation as well as their likelihood of living long enough to observe their children grow up. Much more research is needed to assess the degree to which disease and genetic conditions contribute to voluntary childlessness intentions.

## GAPS IN RESEARCH

Given increasing trends in permanent childlessness, this historically neglected area of study warrants far more attention. Unanswered questions abound, and past findings based on retrospective accounts and limited samples need to be reexamined with improved methods (longitudinal, prospective studies using mixed methods and biological and self-report data). For example, future research needs to examine childlessness among all relationship statuses—not just married couples—and across development. Furthermore, understanding how sex hormones (e.g., testosterone), disease status (e.g., HIV-positive), genetic conditions, and physical and psychological limitations influence the decision to remain childless warrants investigation. Taking a process-oriented approach to the study of permanent childlessness will provide a more in-depth understanding of how and why women and men come to the end of their reproductive lives without bearing or adopting children and how a life without children affects their lives, positively and negatively.

If societies want to maintain or increase total fertility rates (TFRs), pronatal policies need to target alleviating the life-course competition individuals experience with respect to individual goals and parenthood demands (Pierre and Dariotis, 2005). Yet it is not clear such policies will have the desired effect. European nations adopting policies that subsidize childcare costs, provide generous parental leaves, and so on, have not resulted in

increased TFRs; instead, TFRs continue to drop in those nations (Pierre and Dariotis, 2005).

**SEE ALSO** Volume 1: *Transition to Parenthood;* Volume 2: *Birth Control; Fatherhood; Infertility; Motherhood;* Volume 3: *Global Aging; Population Aging.*

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## CHRONIC ILLNESS, ADULTHOOD

**SEE** Volume 3: *Chronic Illness, Adulthood and Later Life.*

## CIVIC ENGAGEMENT, ADULTHOOD

**SEE** Volume 2: *Political Behavior and Orientations, Adulthood; Volunteering, Adulthood.*

## COHABITATION

Cohabitation is defined by social scientists as two adults of the opposite sex living together in an intimate, nonmarital relationship. Cohabitation has rapidly become a prominent feature on the landscape of American family life. Using the 2002 National Survey of Family Growth (NSFG), Kennedy and Bumpass (2007) estimated that 58% of women aged between 25 and 29 had cohabited at some point in their lives. Moreover, about 40% of children in the United States will spend some part of their childhood in a cohabiting household (Kennedy & Bumpass, 2007). Young people in the United States approve of cohabitation at much higher rates than their older counterparts, so it is likely that cohabitation rates will continue to rise in the United States (Smock, 2000).

In attempting to understand the causes and consequences of the rise in cohabitation, scholars have tried to identify whether cohabitation is an alternative to marriage, a prelude to marriage, or a convenient dating arrangement. Clearly all three forms of cohabitation exist, but most agree that the most common form, at least among young adults, is as a prelude to marriage. However, consensus is growing that cohabitation is still an *incomplete* institution in the United States with wide variations in the meanings and norms associated with it.

### COHABITATION OVER THE LIFE COURSE

The 2000 U.S. Census counted 5.5 million households that are maintained by a cohabiting couple. Although this number reflects a substantial increase in the incidence of cohabitation over the previous 20 years, it still underestimates the true prevalence and impact of cohabitation. The Census figure is an underestimate because cohabitations are usually short-lived, either quickly dissolving or progressing to marriage. Thus, at any given time the number of cohabiting couples is very small relative to the number of people who have ever cohabited. By contrast, examining cohabitation trends across the life course can provide a more accurate account of cohabitation's dramatic increase in frequency and impact.

Young adults increasingly delay marriage and many cohabit in the meantime. Data for 2002 indicate that 62% of women's first marriages are preceded by cohabitation either with their spouses or with someone else. Cohabitation is even more common following a divorce and may partly account for observed declines in remarriage rates (Kennedy & Bumpass, 2007). Although cohabitation in later life has received substantially less attention than other life course stages, anecdotal evidence and small-scale studies suggest that cohabitation is on the rise among the elderly as well (Chevan, 1996; Brown, Bulanda, & Lee, 2005). Cohabitation, like marriage, tends to cluster with other important life course transitions, such as job changes, residential moves, and breaks in school enrollment (Guzzo, 2006).

These trends among adults have important implications for children's family experiences. According to 2002 data, about one in three births involve an unmarried mother and of these, about half the mothers are cohabiting with the baby's father. In addition, many mothers cohabit with a man who is not the father of their children, for example, following a divorce. The result is that approximately two in five children spend some time living with a cohabiting parent before they reach age 16 (Kennedy & Bumpass, 2007).

### DIFFERENCES BETWEEN COHABITATION AND MARRIAGE

The implications of a societal shift from marriage to cohabitation depend partly on how much these arrangements differ and partly on the ways they differ. Scholars have focused on five dimensions along which marriage and cohabitation differ: stability and commitment, relationship quality, economic security, fertility, and cooperation. Starting with stability and commitment, most cohabiters (about 75%) expect to marry their partner (Manning, Smock, & Majumdar, 2004). Of those who expect to marry, most have *definite plans* to do so. Thus, many cohabiting couples are in committed relationships, but a significant minority is not. Despite the high levels of commitment, cohabiting unions are unstable. Among first cohabiting unions in the period from 1997 to 2001, only about one third resulted in marriage and among those who had not married, fewer than two thirds were still together after two years (Kennedy and Bumpass, 2007). When compared with prior estimates (Bumpass & Lu, 2000), these findings suggest that long-term cohabiting relationships are becoming more common, but cohabiting unions continue to be less enduring than marriages.

Cohabiters also are less satisfied with their relationships than married couples. Importantly, the lower average levels of stability and relationship quality among cohabiters are driven largely by the very low stability and quality levels of the minority who do not plan to marry. Cohabiters with marriage plans, especially those who are in their first cohabiting relationship, enjoy similar levels of relationship quality and stability as those who are married (Brown & Booth, 1996; Teachman, 2003).

| | 1960 | 1970 | 1980 | 1985 | 1990 | 1992 | 1994 | 1996 | 1998 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total number of unmarried couple households (000s) | 439 | 523 | 1.589 | 1.983 | 2.856 | 3.308 | 3.661 | 3.958 | 4.236 | 4.736 |
| Number of unmarried couple households with children under 15 years | 197 | 196 | 431 | 603 | 891 | 1.121 | 1.270 | 1.442 | 1.520 | 1.675 |
| Percent total unmarried couples households with children under 15 years | 44.9% | 37.4% | 27.1% | 30.4% | 31.3% | 33.8% | 34.6% | 36.4% | 35.9% | 35.4% |

SOURCE: U.S Census Bureau. *Current Population Reports*, P20-537. Table UC-1. Washington, DC.: U.S. Census Bureau, 2001 in (2002). *Father Facts 4*. Gaithersburg. MD: National Fatherhood Initiative. Pg 76.

***Figure 1.*** *Number of unmarried couple households by presence of children under age 15, 1960–2000.* CENGAGE LEARNING, GALE.

Other important dimensions along which marriage and cohabitation differ are economic potential and employment security. Generally, cohabitation is more common among couples with lower socioeconomic status. Among men, higher levels of education and earning potential are associated with a lower likelihood of forming a cohabiting union and a higher chance of marrying (Thornton, Axinn, & Teachman, 1995; Xie, Raymo, Goyette, & Thornton, 2003). Further, men's job instability is associated with a couple's decision to cohabit rather than marry (Oppenheimer, 2003). Both qualitative and quantitative accounts of cohabiting families describe economic insecurity as a key factor blocking marriage (e.g. Smock, Manning, & Porter, 2005).

In some European countries, Sweden for example, cohabitation is viewed as an alternative form of marriage (Heimdal & Houseknecht, 2003). One reason why Swedes tend to see cohabitation as similar to marriage is because most children in that country are born to cohabiting couples. In the United States, however, an increasing proportion of children are born outside of marriage. Given the steep rise in cohabitation among single adults, many of these births occur in cohabiting couples, leading some researchers to question whether fertility continues to distinguish marriage and cohabitation. On the one hand, the proportion of pregnant cohabiters who marry before the birth of their children is declining, suggesting that cohabitation is becoming an acceptable context for childbearing. On the other hand, there is no growth in the likelihood that cohabiting couples will become pregnant, indicating that cohabitation is not becoming a preferred arrangement for parenthood. Mexican-American women are an exception to this general pattern. Among cohabiting women, levels of fertility for Mexican Americans are much higher than for Anglo-Americans, suggesting that for this group cohabitation may be a preferred and accepted arrangement (Wildsmith & Raley, 2006). In other words, fertility continues to distinguish marriage from cohabitation, but marriage is becoming less distinct from cohabitation along this dimension, perhaps especially for Mexican Americans.

Two of the foundations of marriage are economic cooperation and specialization. That is, married couples tend to pool resources and, although there is some overlap, husbands typically do different tasks than wives, which may include differential involvement in paid work. The interdependence that specialization creates may serve as a barrier to divorce. This is one way that marriage is distinct from cohabitation. Whereas among spouses having similar incomes is positively associated with the risk of divorce, among cohabiters having similar incomes is associated with stability (Brines & Joyner, 1999). Research on housework provides further evidence that specialization and cooperation are less evident in cohabitation than marriage. The difference in time spent on housework performed by husbands and wives is greater than the difference between cohabiting partners (South & Spitze, 1994). This is not because cohabiting women do less housework than their married counterparts; cohabiting men do more housework than married men do (Davis, Greenstein, & Marks, 2007). In addition, cohabiting couples with a more traditional division of labor move more quickly to marriage (Sanchez, Manning, & Smock, 1998). Taken together, this research supports the idea that specialization and economic cooperation distinguish marriage from cohabitation. This distinction may arise because cohabitation, at least in the United States, is a relatively short lived and sometimes tentative arrangement, which reduces the benefits of specialization and increases the risks associated with pooling economic resources.

## THE IMPACT OF COHABITATION ON ADULTS AND CHILDREN

Scientists and policy makers alike are interested in the long-term ramifications of the rise in cohabitation rates. This impact is difficult to study for a number of reasons. First, as indicated already, the meaning of cohabitation is unclear and different groups are likely to understand and be affected differently by it. Second, cohabitation is a *moving target* with the norms and meanings associated with it rapidly shifting over time. Third, many of the purported effects of cohabitation may be due to social selection. In other words, the kinds of people who enter cohabiting relationships may also be disposed to other kinds of behavior so that, for example, what seems to be an effect of cohabitation on relationship quality is actually caused by the characteristics of people who choose to cohabit. Despite these limitations, scholars have compiled an impressive trove of information about the outcomes associated with cohabitation for both adults and children.

As already mentioned, cohabiting relationships in the United States tend to be unstable compared with marital relationships. One way in which the instability associated with cohabitation affects cohabiters is the quality and availability of resources from kinship networks. Some evidence suggests that young adult cohabiters reap fewer benefits from parents compared with married young adults (Eggebeen, 2005). Cohabiters also differ from married adults in the impact of relationship dissolution. Although formerly married men tend to be better off after a divorce, formerly cohabiting men experience little financial change after dissolution and formerly cohabiting women suffer about the same financial loss as formerly married women (Avellar & Smock, 2005). Cohabiting relationships also tend to be more violent than married relationships although this is likely the result of the least violent cohabiting couples choosing to marry and the most violent married couples choosing to divorce (Kenney & McLanahan, 2006). Entering a cohabiting relationship appears to have some risk-reducing benefits, especially for men. Men experience similar reductions in marijuana use and binge drinking whether they enter cohabitation or marriage (Duncan, Wilkerson, & England, 2006).

Cohabiters are less healthy than their married counterparts, likely because cohabiters have fewer coping resources and lower relationship quality (Marcussen, 2005). For example, among older adults, cohabiting men experience significantly poorer mental health compared with married men, but cohabiting and married women have similar levels of mental health. Scholars hypothesize that, among older adults, a population for whom caregiving roles are highly gendered, married men benefit from the security of having a caregiving wife, whereas cohabiting women may benefit from having fewer caregiving obligations (Brown et al., 2005). So overall, although some of the differences between cohabitation and marriage in adult outcomes appear to be due to selection, the relative instability of cohabitation may also contribute to some negative outcomes.

An increasing number of children spend part of their childhoods in households headed by a cohabiting couple. Social scientists have developed a modest literature investigating how children fare in cohabiting households. Cohabitation appears to be a significant source of instability in the lives of some children in the United States. This is especially true when a child's mother (or father) moves in and out of several cohabiting relationships while the child is living in the parental home (Raley & Wildsmith, 2004). Several studies indicate that children (and adolescents) in cohabiting households exhibit more behavioral, health, and educational problems than children living in married households.

What is less clear is whether the presence of two adults in a cohabiting household is better for children than a single-parent household is. Most evidence suggests that factors such as instability, lower socioeconomic status, and poorer mental health among mothers in cohabiting relationships offset any potential gains that children may accrue from having a second adult in the household. Indeed, as some research on stepfamilies has shown, the presence of an adult who is not a biological parent may be a stressor for children (Manning & Brown, 2006; Raley, Frisco, & Wildsmith, 2005; Artis, 2007; Ginther & Pollack, 2004; Brown, 2004; Manning, et al. 2004; Manning & Lamb, 2003). Selection is probably responsible for many of the differences between child outcomes in cohabiting households versus findings in married households. Instability, however, may also contribute to poorer childhood outcomes in cohabiting households.

## COHABITATION OUTSIDE THE UNITED STATES

Cohabitation is on the rise in many parts of the world. As in the United States, the role of cohabitation in the family systems of many of these nations is unclear. In a few countries, such as Sweden, cohabitation appears to be a stable and entrenched alternative to marriage (Heimdal & Houseknect, 2003). In others, such as New Zealand, cohabitations are short lived and unstable, similar to cohabitations in the United States. Cohabitation has spread rapidly throughout much of Europe, including the United Kingdom, but the practice has been slow to spread in Italy and Spain (Heuveline, Timberlake, & Furstenberg, 2003; Heuveline & Timberlake, 2004; Seltzer, 2004). In Latin America, cohabitation has a long history, because *informal unions* have long existed as an alternative to marriage. Some

evidence, however, suggests that in countries such as Mexico, cohabitation is becoming a normative precursor to marriage as well as an alternative (Heaton & Forste, 2007). Less research has been conducted on cohabitation in Asia, where rates have been generally lower. Some evidence in Japan indicates that increases in cohabitation may be forthcoming, as Japanese young people report accepting cohabitation as a legitimate precursor to marriage at much higher rates than older people do (Rindfuss, Choe, Bumpass, & Tsuya, 2004). Little is known about cohabitation in the Middle East, although it is presumably low in traditionally Muslim countries. Cohabitation rates have risen in sub-Saharan Africa in recent years, with some countries, such as Botswana, exhibiting dramatic growth (Mokomane, 2007).

## POLICY IMPLICATIONS AND OPPORTUNITIES FOR FUTURE RESEARCH

High rates of cohabitation have a number of policy implications. Lawmakers and business leaders will need to formulate policies that account for cohabitation. Some states and many large corporations already allow adults to nominate domestic partners as beneficiaries and, as cohabitation rates climb, access to health benefits for cohabiters is likely to increase. The welfare of children in cohabiting relationships is another important policy issue. Research showing that children fare worse in cohabiting relationships than marital relationships has been used by some lawmakers to help pass marriage promotion policies. Some scholars are skeptical about marriage promotion legislation, contending that the negative association between cohabitation and child well-being is largely due to the characteristics of people who decide to cohabit. They argue that simply getting cohabiters married will not solve children's' problems and the money would be better spent on addressing underlying problems such as poverty, poor health care, and substandard education (Smock & Manning, 2004). These and other issues will continue to be debated as cohabitation rates rise.

Future research will demonstrate whether cohabiting unions in the United States become stable like the unions observed in parts of Europe and, if so, whether more stable cohabiting unions produce better outcomes for adults and children. Researchers will also find fruitful ground for investigation in the cohabiting unions of older adults, especially if current youth maintain their positive attitudes toward cohabitation as they age. Although it is often assumed that cohabitation fits somewhere between marriage and noncoresidential romantic relationships (or *dating*), very little is known about the diversity and character of modern noncoresidential romantic relationships. As researchers fill this knowledge gap, scientists will be able to make valid and useful comparisons between cohabitation and dating. Finally, there is much more room for understanding how the forms of cohabitation vary by socio-economic status and race and ethnicity.

## CONCLUSIONS

Cohabitation rates are rising around the world, prompting some scholars to suggest that a major demographic transition is underway, one in which cohabitation will become a normative alternative to marriage (Van de Kaa, 1988). In the United States, the most recent evidence suggests that cohabitation is mostly a prelude to marriage and is still far from the stable alternative to marriage observed in some European nations. The relative instability of cohabiting relationships in the United States likely contributes to poorer outcomes for both adults and children in cohabiting households compared with married households. After nearly 30 years of rapidly rising cohabitation rates, cohabitation has become an important family form with potential impacts at every stage in the life course.

**SEE ALSO** Volume 1: *Transition to Marriage;* Volume 2: *Dating and Romantic Relationships, Adulthood; Divorce and Separation; Family and Household Structure, Adulthood; Gays and Lesbians, Adulthood; Marriage; Mate Selection; Remarriage;* Volume 3: *Singlehood; Widowhood.*

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# COMMUNITARIANISM

*Communitarianism* is a sociopolitical philosophy that views individual character virtues and social bonds as central to the lives of social actors. Communitarians believe that social groups—particularly communities—must strive to balance individual freedoms and the welfare of the collective. Elements of communitarian thinking can be found in sociological, philosophical, and political writing and teaching. Contemporary proponents of this movement include Amitai Etzioni (b. 1929), Robert Bellah (b. 1927), Philip Selznick (b. 1919), and Daniel Bell (b. 1919), but aspects of communitarianism are traceable to earlier theorists such as Karl Marx (1818–

1883), Emile Durkheim (1858–1917), and Ferdinand Tönnies (1855–1936). Furthermore, particular facets of communitarian thought such as identity formation, value internalization, and generativity, are exceptionally useful for understanding different stages of the life course and human development.

## DEFINING COMMUNITARIANISM

Balance is a consistent theme within communitarianism. Etzioni (1993), in particular, states that the movement is concerned with society's ability to balance the needs of individuals with the collective good. These opposing goals represent the centripetal and centrifugal forces (Etzioni, 1996). According to physicists, centripetal forces sustain a body's circular path at a consistent speed. Similarly, in the communitarian sense, these forces are the resources that individuals provide to the community that enhance the collective good. By contrast, centrifugal forces are the rotational forces that are oriented *away* from the axis of rotation and therefore, according to communitarians represent individuals' quests for independence from the collective. Communitarianism argues that all social groups, especially communities, are pulled in opposing directions by these competing forces. Communitarians therefore envision a sociopolitical environment where individuals are given a particular level of freedom and rights to seek their autonomy at the same time as they work for the common good and to uphold their social responsibilities.

D. R. Karp (2000) argues that communitarianism reflects a struggle with the conditions of modern societies and, in particular, contemporary societies' overt focus on individual liberties. He notes that communitarians believe that modern societies separate individuals from communities, cause a subsequent decline in community life, and promulgate personal independence and individuality. Therefore, according to communitarians, fundamental aspects of modernity destroy communal bonds and shared values and stifle the social obligations and voluntary activities that contribute to the common good.

## CLASSIC AND NEW COMMUNITARIAN THOUGHT

The classic and new forms of communitarianism must be distinguished. Although the term *communitarianism* was not used until the last few decades, basic elements of communitarian thought can be found in the writings of classical sociological theorists such as Tönnies, Durkheim, and Marx. The primary distinction between classic communitarian thought and the new communitarianism is that the latter is more concerned with the balance between the *person* and the community, whereas the classic sense focuses almost entirely on the importance of social forces and social bonds.

For example, O. Newman and R. de Zoysa (1997) suggest that communitarianism bears a conceptual resemblance to Tönnies' models of *Gemeinschaft* and *Gesellschaft*. *Gemeinschaft* is a German word that in this sense refers to social life within small-scale communities that emphasize shared social values and an active voluntary approach to social responsibilities. By contrast, *Gesllschaft*, as used sociologically, characterizes communities with weaker civic bonds, strained social relations, and a heightened sense of self-interest. The distinction between *Gemeinschaft* and *Gesllschaft* mirrors Etzioni's contemporary concepts of *authentic* and *distorted* communities. Within the new communitarian approach, the ideal community—that is, the *authentic* community—is responsive to the *true needs* of all its members, respecting and maintaining the balance of centripetal and centrifugal forces. Such a community allows individuals to flourish creatively and separately, while providing moral and social boundaries that reflect the responsibility to the common good.

According to Etzioni (1996), the term *communitarian* was adopted for the social philosophy to emphasize the necessity of individuals to acknowledge and engage in their responsibilities to the community. He states that since the 1950s, developed society has not heeded the "moral voice" and has therefore experienced the faltering of the traditional family structure, the diminishing role of schools in transmitting moral and social values, and the erosion of confidence in institutional leaders (Etzioni, 1995).

## CRITIQUES OF COMMUNITARIANISM

D. E. Pearson (1995) argues that Etzioni's vision of an authentic community is impractical, unattainable, and does not fully take into account that humans are naturally motivated to strive for status and power through competition, and are not motivated through compassion and altruism for others within their community. S. Prideaux (2002) states that communitarian leaders such as Etzioni employ a restricted and short-sighted view of community in that he has confined his analysis to American social relations. Others contend that the whole communitarian movement is overly nostalgic, longing for a past that was not as pleasant as memory leads one to recollect.

## COMMUNITARIANISM AND THE LIFE COURSE

According to communitarians, it is the individual's duty to fulfill his or her social responsibilities actively at all stages of the life course. Individuals should have the rights to express their individuality, but be grounded by the moral and ethical requirements necessary to reproduce society. This line of thinking echoes Erik Erikson's (1950) lifespan theory of human development and the

concept of *generativity*, which consists of actions taken to benefit society through guiding younger people to become custodians of society.

Aspects of communitarianism are also present in literatures emphasizing agents of socialization (e.g., family and schools), as well as the timing and sequencing of individuals pathways through the life course (e.g., becoming a parent, spouse, or worker). Institutions within communities such as families, schools, and groups provide the frameworks upholding social values and order. Furthermore, individual identities are developed and formed within these frameworks of understandings and values (Sayers, 1999). It is the balance of social order and the individual's quest for independence that not only propels the community but also yields a more fruitful environment for individual identity formation. Thus the tension between the individual and society central to communitarian thought is also central to analyzing and understanding the life course.

**SEE ALSO** Volume 1: *Social Capital;* Volume 2: *Individuation/Standardization Debate; Social Structure/Social System.*

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# CONSUMPTION, ADULTHOOD AND LATER LIFE

Consumption is a diverse set of practices at the intersection of human life and the material world. In its everyday meaning, consumption is about individuals satisfying needs and doing so as a private matter. However, as soon as one inquires how individuals come to understand both their needs and the resources that would meet them, consumption becomes a public and social matter. The study of consumption is about acts of using and using things up, but also necessarily about the way such acts come about. In this regard, age and life course change are more than mere contexts for consumption; they in fact propel it.

Researchers who study consumption approach it from many different points of view. One perspective focuses on the stages of consumption, the number of which, in turn, depends on whether people or objects are the primary focus. A tendency to focus on the person—the consumer—sets out stages such as acquisition (by purchase, gift, or creation), transient use or extended possession, and eventual disposal. A focus on objects or commodities may raise questions about their origin (i.e., their production) and, preceding that, their extraction from the environment. The complete cycle thus runs from extraction to disposal. For example, this encyclopedia, in its print or electronic form, is an object that will have had a multistage career, but it is of only present interest to consumers (readers) who have little regard for its origin or fate.

Another way to think about consumption practices is with an emphasis on either the collective or the individual. At the former, *macro* level, what comes to the fore are the enterprises, industries, and social institutions that drive the consumption cycle. At the *micro* level, the consumer and his or her outlook and behavior are central; for example, what are the individual's motives for acquiring or keeping things? The reasons for consumption—retail purchase being a huge topic here—are many but they can be reduced to two: things are practical (they serve some useful function) or things are symbolic (they communicate something about oneself and others) (Belk, 1988). The reasons for having a single thing can be mixed and they can shift over time. Eyeglasses, for example, assist vision but they also adorn the face. A particular pair of glasses is an object worth having, at least until one's prescription changes or fashion renders them outdated or obsolete.

Human development and aging lend a dynamism to the ways that the material world furnishes daily life. Across the years of adulthood, bodily changes occasion alterations in the way that needs are defined and met. The progression of life circumstances and the role sequences of family and work careers likewise bring shifts in the provisioning of everyday activity. At the aggregate level, cohorts of (aging) consumers are also moving through the life course, replacing one another at various stages of life, thus layering the consuming public with different tastes and habits shaped by cohorts' unique historical experience.

Given the wide array of consumption practices, almost every branch of knowledge and scholarship can contribute perspectives on this subject. This article considers consumption as a social activity and addresses how consumption unfolds over the course of adulthood, how marketers supply both goods and models of consuming, and whether some age groups consume at the expense of others.

## CONSUMERS AT DIFFERENT AGES

Theorists of consumer culture maintain that, in the modern world, people's values and identities are defined in relation to what they consume (Giddens, 1991; Slater, 1997). Whereas traditionally people may have derived a fixed sense of themselves from religion, work, or family, the dominant resources for identity construction are now to be found in the materials and symbols of the marketplace. Moreover, the self-representations of consumer culture are a fluid, emergent, and ongoing, thus contributing to an unsettledness in modern life. The desirable and undesirable aspects of this condition have generated much social criticism.

The fluidity of identity only accentuates the adult experience of time's passing. To some extent, aging already schedules the obligation to reinvent oneself. Against a backdrop of culturally given age-related norms, expectations, and roles, people use the material world to manage age-appropriate presentations of themselves. As the body changes, consumption changes. Continuing with habits learned in youth and adolescence, adults employ grooming, clothing, and projects of self-care to stage and restage the apt appearance of their person. Fitness routines, lifestyle regimens, cosmetics, and drugs may be deployed to delay, resist, or mask the signs of aging (Katz & Marshall, 2003). Also pacing bodily change, the consumption of health care rises inexorably with advancing age.

Consumption abets not only the long arc of adulthood, but also the recurring events that mark time. For example, anniversaries of birth and marriage are unthinkable without greeting cards, gifts, and festive meals—commodities all. Not to shop on behalf of birthdays and anniversaries is to let these events pass unremarked.

The social roles comprising the life course and the transitions between them are enacted with goods and services. When young adults establish independent residence, perhaps with a partner, living areas and kitchens will need to be stocked. Acquiring a house will extend the task of homemaking to an entire property. Homes, however, are rarely bought outright. Rather, the funds are purchased at extra cost—a mortgage—over a long period of time. Work roles compel the acquisition of specialized clothing, tools, transportation, and self-care materials. Upon changing jobs, these materials may need to be refreshed. Daily and weekly release from work—leisure—is the occasion for lifestyle explorations via entertainment and recreational consumption.

Parenthood multiplies the obligation to consume, but with a new wrinkle. Parents undertake surrogate consumption for dependent children who are themselves on developmental timetables with their own requirements for types, sizes, and styles of commodities as well as their own projects of identity construction. For all the attention to children and youth as a consumer market, it is primarily parents who choose and buy on behalf of the young, from baby rattles to braces to college tuition.

Having homes and responsibility for others orient adults to maintain their employability and well-being. They purchase insurance of various kinds to minimize the risk of property or income loss. When possible, they also save for old age, which is deferred consumption, but also present consumption to the extent that they pay fees for financial services. With a nest egg (e.g., retirement savings or a 401[k] plan), workers are eventually permitted the leisure of a self-indulgent retirement. Retirement, in fact, can be regarded as an item of consumption, perhaps the largest of a lifetime, and the reformation of identity that it permits is what makes it alluring, delightful, and worth saving for over so many years (Ekerdt, 2004). Another open-ended role of later life—grandparenthood—has few norms for performance, but the bestowal of gifts and experiences on grandchildren is common. Finally, survival into later life will almost certainly involve the continued use of health services and perhaps long-term care, though the ability to consume these goods may need subsidizing by government or the family.

As adults acquire consumer resources in order to enact the sequential roles and stages of life, the goal is not merely to use or have things but also to *be* someone—a homeowner, a hunter, a hostess. Consumption assembles a story about oneself and it is often the means by which to evaluate how well life is going. Two life course transitions merit special mention as market-mediated events: marriage and death (i.e., the funeral and body disposition). Both transitions typically entail extraordinary expenditures for short-term celebrations that are undertaken to honor the social significance of the particular lives in passage.

Recalling the consumption cycle, possession is a life course constant along with acquisition. People proceed through adulthood accompanied by a convoy of material support. Some items are transient (children's toys) and some endure (major furniture, photographs). Goods flow in and out during daily life, but some stick and this residue accumulates over time. The resulting possessions are not mere inert lumps of matter. What is kept must be placed, stored, arranged, maintained, cleaned, insured, emotionally invested, and even animated in the sense that the possessor attributes to them an inner life. People

***Eaton Center Mall in Toronto.*** © RICHARD T. NOWITZ/CORBIS.

cultivate their holdings, taking mass-produced goods such as cars or cookware and make them over as their own (McCracken, 1988). Some things are special, but a lot of personal property is mundane. Out of intergenerational responsibility, individuals adopt family items—curios, heirlooms—as a way to preserve a collective family identity. There has been some research suggesting that younger adults value possessions more for their usefulness, whereas older adults prize symbolic value, but life course differences in the quality of attachment to possessions are not well understood (Kleine & Baker, 2004).

The conclusion of the consumption cycle—disposal—also has life course dimensions. Possessions become candidates for disposal for many reasons, including when their total volume grows too large over time. The imperative to downsize is a staple of popular media, giving rise to the anti-clutter industry that is, ironically, another form of consumption. Life course change is one circumstance that invites disposal, for example, when people exit social roles, become disabled, or need to manage age-related vulnerability, perhaps by moving to a smaller residence. Upon the death of older adults, it may fall to survivors to disassemble the household and discard things.

If keeping things is work, then so is disposal. Whether people give, sell, donate, or discard possessions, the process often involves social calculation and strategizing, efforts to make things presentable, contracting with others, and emotional management. The convenience of storage may well outweigh the inconvenience of disposal, especially if rising affluence across adulthood allows trading up to larger homes.

## AGE SEGMENTATION OF CONSUMER MARKETS

A market is a system or structure for exchange, such as commercial exchange between buyers and sellers. A market also denotes a category of the population grouped according to some characteristic, such as geography, to which things might be sold. Grouping by age yields such target segments as the *youth* market or the *mature* market.

It is a chicken-and-egg question whether merchants induce the demand for goods or consumers create it. In consumption studies, competing viewpoints about the priority of supply and demand generate competing portraits of the consumer (Gabriel & Lang, 1995). On the one hand, consumers are compliant dupes, their desires manipulated by seductive marketing. On the other hand, they are creative agents of self-expression, rationally choosing what and when to consume. Over various moments of adulthood, consumers are likely to evince both ideal types and every gradation in between.

Marketers offer goods, but they also cultivate the market for those goods, predisposing consumers of different ages to understand their welfare in relation to certain products. Each wave of young adults arrives from adolescence already socialized to the idea that every generation has its own music, fashion, and pastimes. The next-stage task is to lead maturing adults to shift their tastes from the things of youth to the goods of grown-ups (e.g., the cut of clothes, breakfast cereal, or real estate). The matter is tricky, however, because advertisers will also want to preserve brand loyalty. Life stages such as

motherhood or retirement can be portrayed as important aspirations. At the same time there are products that stand for rebellion against age, such as sports cars and motorcycles for middle-aged men. The marketplace deals in discrete commodities but also suggests entire careers of consumption. The American Dream is a standard life course script that implies a sequence of successively richer goods and experiences (the home is iconic), culminating in residential, familial, and occupational contentment at midlife. Adopting this ideal, people then conduct their lives to bring it about.

Marketers have long concentrated on consumers younger than 50 and especially coveted those aged 18 to 34 in order to "get them young." But companies are awakening to the potential of middle-aged and older buyers. Household income increases with age to peak in the 50s, and wealth rises to peak in the 70s. Compared to preceding generations, current cohorts over the age of 50 (now including the baby boom) are more affluent and more willing to endure debt. The rising wealth of older adults and, not incidentally, the post–World War II (1939–1945) habits of consumerism they have brought along with them, portend a shift in the image of later life (Gilleard & Higgs, 2000). Rather than being viewed as dependent and needy, elders will increasingly be courted for their market power. The models of maturity already advertised include the fun grandparent, the foresighted financial planner, the restlessly active retiree, and the rational, discriminating consumer of senior housing.

Age-based or cohort-based marketing has various guidelines (Moschis & Mathur, 2007). Most important of these guidelines is being cognizant that age groups are not homogeneous. A small industry has arisen to advise companies how, depending on product, to subdivide age categories by values and lifestyles, shopping behaviors, and service and price consciousness. For example, what product qualities, promotion strategies, and retail arrangements would beckon larger consumer outlays? Do buyers prefer a sales force that is younger, of the same age, or older? In advertising, direct appeals to, or reminders about, chronological age are unwelcome. Rather, the pitch works better when made indirectly, to life circumstances or cohort experiences. For example, a gray-haired model or spokesperson in an ad can convey the intended audience, but is acceptable only if somewhat younger than the target demographic. Finally, an age or cohort link may be inadvisable for some products and services, which are better marketed with an intergenerational appeal.

## FAIRNESS

Consumption is necessarily threaded with ethical issues because the definition of needs and ways to meet them have implications for the common good. Moral and political discourses have long addressed whether resources are justly allocated; whether the values of consumerism are constructive; the environmental costs of the consumption cycle; and whether markets are conducted with fairness (Wilk, 2001). What is ostensibly an activity of the private sphere—satisfying one's needs—raises very public questions about economic, political, and cultural institutions.

Fairness debates have been a life course issue since the 1980s in most of the advanced economies (Moody, 2006). In the United States, the question has been posed under the heading of *generational equity*. Observing that the aggregate economic well-being of children has fallen while that of elders has risen, some quarters of the policy community have asked whether federal old-age programs deprive families with young children of their fair share of social resources. It is a fair observation that old-age entitlement programs such as Social Security and Medicare transfer, via taxation, buying power from younger cohorts to older citizens. At the same time, it is far from assured that any retrenchment in these programs would benefit the neediest children. Intense discussion has surrounded proposals for age-based rationing of health care. Older cohorts consume a disproportionate amount of health care, which is subsidized by public funds, and costs are always rising. Might age be used as a criterion for allocating and limiting health care? Debates about generational fairness are likely to continue, being sometimes philosophical and often sharply ideological. Against the contention that one age group consumes at the expense of another, others have argued for the essential interdependence of generations in furnishing one another's needs across the life course.

**SEE ALSO** Volume 1: *Identity Development;* Volume 2: *Cultural Images, Adulthood; Debt; Leisure and Travel, Adulthood; Relative Cohort Size Hypothesis; Saving; Time Use, Adulthood;* Volume 3: *Leisure and Travel, Later Life; Time Use, Later Life.*

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**David J. Ekerdt**

# CONTINGENT WORK

SEE Volume 2: *Flexible Work Arrangements; Self-Employment.*

# CONTINUING EDUCATION

*Continuing education* is a term used by policy makers and educators in many countries. It refers to any form of educational provision for people who have completed their initial fulltime education and entered the adult stage of their life course, which usually involves entering employment. This is a broad definition of continuing education since it includes liberal adult education, professional updating, vocational training, and regular degree or other award-bearing courses that are undertaken by mature students. However, the term is also sometimes used in a narrower sense—to refer only to short courses provided for adults who have completed their substantive formal education.

Several other terms are related to the concept of continuing education. *Recurrent education* carries the implication that an individual alternates formal education with employment across the life course, rather than completing his or her formal education before entering into adult life. Thus, like the broad concept of continuing education, recurrent education seeks to move away from a "front-end" model of education, which takes education in adulthood to be an indulgent or a remedial "add on" to the main education obtainable in compulsory schooling. The term *adult education* also rejects the front-end model; it implies that there are forms of knowledge and ways of learning distinctive of adulthood.

In the late 20th and early 21st centuries, the term *lifelong learning* became increasingly prominent and influential in research and policy making. For example, the 1990s saw the publication of many national policy papers and influential reports from the Organisation for Economic Co-Operation and Development (OECD), the European Commission, the Group of Eight (G8) governments for the eight largest economies, and from United Nations Educational, Scientific, and Cultural Organization (UNESCO), thus bringing in many non-European countries. Lifelong learning is connected to the notion of cradle-to-grave educational provisions and to the idea that education must meet the needs of rapidly changing modern industrial democracies.

Lifelong learning includes vocational and professional updating, liberal education for personal development, and political education for good citizenship. A "learning society" is one that values a broad range of learning and is organized to provide maximum learning opportunities for its members across the life span. Like continuing education and adult education, the concept of lifelong learning recognizes formal, nonformal, and informal learning as worthwhile and valuable to both the individual and to society. (Formal education refers to courses provided by formal educational institutions, such as colleges or universities. Nonformal learning encompasses educational programs provided by organizations whose primary purpose is not education, such as voluntary organizations, churches, or synagogues. Informal learning is learning that takes place in daily life, ranging from watching TV documentaries to holding conversations with friends).

*Further education* refers to full-time and part-time education provided by educational institutions for persons over compulsory school age. It carries a vocational emphasis and is often referred to as "further education and training." Higher education refers to more academic (university) provision.

The key point is that there are several distinguishable but overlapping terms used to refer to various forms and stages of education beyond formal schooling in childhood and adolescence. In terms of the life course, it is extremely important to recognize the validity and value of education throughout life, up to and including old age.

## VALUES IN AND THE VALUE OF CONTINUING EDUCATION

The concept of continuing education values education beyond school and assumes that there is worthwhile learning appropriate to all stages of the life course. For example, people begin to gain skills for the world of work in early adulthood, but the idea of continuing education suggests that adults should continue to gain in competence, broadening and deepening their understanding

and skills across their working lives. Parents and children gain from the provision of parental education and also from family learning where children and parents can learn together. In adulthood and later life, too, people may become part of communities where continuing education may be both politically and personally important. The educational awareness gained by women through the women's movement in the 1960s and 1970s is a good example of this sort of continuing education. Retirement also may bring the opportunity to engage in learning of interest to the individual, an engagement that is known to have both health and social benefits.

The value of continuing education is immense. Levels of education and engagement in learning have been linked to enhanced physical and mental health, as well as economic prosperity. Learning has both intrinsic value, in that it provides satisfaction to the learner, and extrinsic rewards, in that it leads to better employment opportunities, health benefits, and correlates to levels of income.

Educators involved in continuing education, aware of its value and power, are often highly committed to widening access to post-school educational opportunities. "Widening" in this sense means not only increasing the number of people who participate, but also increasing proportional participation by members of disadvantaged social groups.

## EQUITY AND CONTINUING EDUCATION

The issue of equity and continuing education is multi-dimensional, dynamic, and complex. However, many research studies have shown that social groups that face prejudice and systematic individual and institutional discrimination have fewer educational opportunities and obtain fewer educational qualifications than more advantaged members of the population. Thus, for example, many minority ethnic groups and physically disabled persons suffer educational disadvantage across the life course. Moreover, specific forms of knowledge possessed by such groups, such as cultural art forms, tend to be undervalued.

The OECD's work on equity and education includes comparisons across countries, by gender, social class, ethnicity, and disability levels of participation in continuing education (OECD, 1993). Such research supports the general consensus that major gaps persist between social groups in educational access and participation. Further rigorous research to refine our broad understandings about equity and education would be welcome.

Because knowledge, the process of learning, and educational qualifications are all highly valuable to individuals and to communities, there are implications for policy makers and funding organizations that seek to establish more equitable opportunities. The movement to lifelong learning has encouraged efforts to reach underrepresented groups but there remains cause for concern. A tendency to concentrate on employment-related education, for example, excludes retired people and the long-term unemployed. Narrow forms of assessment might penalize the disabled, and barriers remain. For example, problems related to information flow are particularly acute for minority ethnic groups (Field and Leicester, 2000).

## THEMES AND THEORIES

The study of continuing education is multidisciplinary—drawing on established disciplines including psychology, social psychology, sociology, and philosophy. From psychology and social psychology much has been discovered about how adults learn and social studies have shown why, where, and when such learning occurs. Because education is value-laden and the provision of opportunities for continuing education involves political decisions, and because education involves the development of knowledge, philosophical and epistemological analyses have also contributed to understanding continuing education.

Learning is a central component of human life, and thus occurs across the lifespan as individuals change and develop. Knowles's theory of androgogy, or adult learning, has been particularly influential for adult educators and rests on four major assumptions:

- a change in self concept, because adults need to be more self-directive;
- experience, because mature individuals accumulate and expand a reservoir of experience that becomes an exceedingly rich resource in learning;
- readiness to learn, because adults want to learn in the problem areas they confront and that they regard as relevant;
- orientation toward learning, because adults have a problem-centered orientation and are less likely to be subject-centered (Knowles, 1984).

Compared to Knowles's, Freire's ideas, arising out of his experience of the oppression of the masses in Brazil, focus to a lesser degree on the study of how individuals learn and to a greater degree on a more radical form of education to promote active political participation in the wider world. Education in adulthood should raise the level of the consciousness of oppressed groups so that the operation of the economic, political, social, and psychological forces of oppression can be understood and opposed. These political ideas have been influential in encouraging community education, prompting community educators to develop and deliver forms of education that benefit communities and disadvantaged communities in particular.

Research on continuing education conceptualizes post-compulsory education as a social commodity, requiring policy decisions and implementation, funding and administration—practical aspects that also require monitoring and analysis. This research is also itself imbued with implicit value judgments and philosophical and political assumptions.

### POLICY ISSUES IN THE NEW MILLENNIUM

Given the prominence of lifelong learning in the first decade of the new millennium, it seems likely that learning across the life course will continue to be an important educational goal with important policy implications. In the rapidly changing modern world, updating skills and acquiring new ones makes economic sense for individuals and for their societies. And if good teaching is to be offered to students of all ages, the professional development of educators themselves needs to become a matter of career-long learning (Day, 1999). In schools, the curriculum needs to include equipping children with the skills and commitments to become lifelong learners.

Cross-generational learning—in which individuals at different phases of the life course learn with and from each other—has been relatively neglected. Within the movement toward lifelong learning there has been some development of family learning. A key issue for the future will be to monitor and identify good practice in this kind of cross-generational educational provision. Parental education and health education also are crucial areas in connection with individual flourishing and well-being. These forms of education might (and should) be given increasing support. Citizenship education to equip people to be active good citizens is currently receiving attention. This meets the political aspect of lifelong learning and also might (and should) become increasingly supported. A future issue that requires both scholarly and public attention is how to find ways to interrelate these three strands of lifelong learning (vocational/professional, individual/liberal, political/citizenship) in order to provide education across the life course that meets all three of these crucial learning needs.

### CONTINUING EDUCATION AND THE LIFE COURSE

The voluntary nature of post-school learning is important. Adults must be free to choose what kinds, and how much, educational provision in which to participate. However, a corresponding ethical requirement is, surely, that all citizens have an equal opportunity to genuinely choose to partake. OECD studies indicate that more than 10% of 30- to 39-year-olds in Australia, Finland, New Zealand, Sweden, and the United Kingdom are enrolled in continuing education (full- or part-time) compared to the OECD country mean of 4.8%. Similar patterns, although with lower overall rates, are found for persons ages 40 to 49 (Schuller, 2006). Such cross-national differences challenge the notion of free choice and have policy and funding implications.

In schools, lifelong learning implies a need for further curriculum development to increase the agency of pupils by giving more extensive career education and by equipping children with the skills and commitments that will help them to become lifelong learners. Perhaps the most important point is that, given the importance of worthwhile learning to human flourishing across the life course, it is imperative that societies do indeed seek to provide appropriate continuing education. This entails encouraging and supporting learners from all social groups to partake in good quality educational provision at all stages of their lives.

**SEE ALSO** Volume 1: *College Enrollment;* Volume 2: *Educational Attainment;* Volume 3: *Lifelong Learning.*

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*Mal Leicester*

## CONTRACEPTION

**SEE** *Birth Control.*

## CRIME, CRIMINAL ACTIVITY IN ADULTHOOD

Criminologists have long recognized a strong life course pattern in criminal activity. Involvement in crime increases dramatically during the teen years, peaks at

around age 20, and then declines steadily over the rest of the life course, with very low levels observed after age 65. This general pattern is observed regardless of time period, place, and type of crime. However, rates of violent crime appear to peak a bit later (around age 25) than do those for property crimes (around age 20).

This pattern holds whether one considers official statistics (crimes reported to police), self-report data (respondents' reports of their own criminal activity), or victim reports of offender characteristics. Each type of data has limitations—official statistics are subject to vagaries as a result of selective enforcement and underreporting, and self-report and victim data may be biased because of sampling errors and both over- and underreporting—yet all sources confirm the general age–crime relationship. Indeed, the association is so robust that some scholars have referred to the relationship as invariant.

## CRIME ACROSS THE LIFE COURSE

Differences in criminal involvement by gender and race are well documented, with males and minority group members exhibiting higher rates of crime, particularly violent offenses, than females and Whites. For example, the 2006 male arrest rate of 10.8 per 1,000 for the eight most serious crimes reported to the police (homicide, rape, robbery, assault, burglary, larceny, arson, and motor vehicle theft) was almost three times higher than the corresponding rate for females. Similarly, African Americans tend to exhibit higher levels of criminal involvement, with arrest rates about three times those of Whites. These figures should be interpreted with caution because of the possibility that police enforcement practices and biases may distort actual levels. However, self-report data obtained from offenders tend to corroborate these general patterns.

Despite these stark gender and race differences in levels of criminal involvement, the age–crime relationship is apparent within gender and racial groups. For example, female age-specific rates for the eight most serious crimes rise dramatically during the early teen years, peaking at about age 16 and declining steadily afterward. For males the pattern is similar, although rates tend to peak a bit later, at age 18, and rise to dramatically higher levels. Both first arrest and recidivism (or subsequent arrest) rates are considerably higher for males than for females. Aggregate arrest rates are much higher for Blacks than for Whites, yet there is little difference between the two racial groups in recidivism rates. Racial differentials result more from differences in patterns of criminal participation than from differences in the frequency or duration of individual offending.

The age–crime relationship could indicate that criminal activity declines with age among all individuals. However, it also could reflect other scenarios. For example, the same pattern would be observed if the majority of individuals stopped criminal activity once they reached adulthood even though a minority continued to participate actively in crime through adulthood. Alternatively, the age pattern may reflect declines over time in the frequency with which active offenders commit crime or declines over time in the number of active offenders as a result of incarceration, death, or declining health (because of substance abuse or the natural aging process). These scenarios are all consistent with the observation that criminal activity declines with increasing age in a population.

There has been debate about these issues in the field of criminology. One argument suggests that the relationship between age and criminal involvement does not exist for all types of criminals. Terrie Moffitt (1993), for example, classified offenders into two distinct categories: "adolescence limited" and "life course persistent." An adolescence-limited offender engages in delinquent and criminal behavior during adolescence and stops after reaching adulthood. Criminal activity is confined to a relatively short period, and a clear decline in crime with increasing age is observed among this group. The vast majority of delinquent adolescents can be characterized this way. Criminal activities among life course persistent offenders, or so-called career criminals, are marked by considerable frequency, seriousness, and a long duration. Moffitt suggested that offense and arrest rates in this group remain fairly constant over the life course. Other scholars have included additional types of criminals in this categorization, noting the presence of a low-level chronic group whose members continue to offend but with less frequency through adulthood (Nagin & Land, 1993).

One frequently cited statistic that supports the contention that criminal behavior is concentrated heavily among a few individuals with criminal careers comes from a 1972 study titled *Delinquency in a Birth Cohort* (Wolfgang, Figlio, & Sellin, 1972). Researchers found that although a significant proportion of the young men in that birth cohort had had at least one run-in with police, only 6% of them were responsible for the majority of crime in that cohort. A 1979 study by Alfred Blumstein and Jacqueline Cohen focused on serious offenders in Washington, D.C., and showed that the relationship between age and crime disappeared when cohorts were followed over time, with rates of criminal involvement for these serious offenders remaining fairly constant with age.

Other scholars disagree with that characterization. Travis Hirschi and Michael Gottfredson (1983) argued that the relationship between age and crime is explained by biological (e.g., hormones or physical characteristics) rather than social factors and supported their thesis by showing that the relationship between age and crime does not vary across persons, time periods, place, and type of crime. Other researchers have noted that studies

supporting the notion of a career criminal tend to be limited by several design flaws. First, these studies typically follow offenders for a relatively short period and certainly not through midlife and later life. Second, types of criminals tend to be identified retrospectively rather than prospectively, and thus this approach by definition observes only high-level criminals who have not desisted (Laub & Sampson, 2003).

Certainly, some research shows that even among career criminals, involvement in crime seems to diminish with age. For example, retrospective self-reports by incarcerated offenders indicate that involvement in crime declines as offenders age. Independent evidence supports this notion. John Laub and Robert Sampson (2003) found in their sample of highly delinquent boys who were followed up to age 70 that offenses eventually declined among all groups of offenders. The peak age of offending varied, as did the rate of decline with age, but the results clearly showed that the age–crime relationship holds even among the most serious, persistent, and frequent offenders.

## LIFE COURSE THEORIES OF CRIMINAL BEHAVIOR

Most theories of crime focus on explaining differences in criminal behavior among individuals. Strain theory emphasizes economic disparities among individuals as a key reason for differential criminal involvement, whereas social disorganization theory focuses on environmental factors. Such explanations are static in nature rather than dynamic and do not attempt to explain the extent to which the criminal behavior of an individual may change over time.

Developmental or life course explanations for criminal behavior focus on this question, asking how criminal behavior develops and changes over the life course. Although there are a number of variants of developmental criminological theories, they all recognize that life events and circumstances can alter criminal behavior. Specifically, these theories focus on three primary issues: identifying factors that explain the initiation and development of antisocial and criminal behavior, documenting risk factors for crime at various ages, and determining the degree to which life events alter the trajectories of those engaged in crime.

## FACTORS EXPLAINING THE INITIATION AND DEVELOPMENT OF CRIMINAL BEHAVIOR

Numerous studies indicate that problematic childhood behavior such as temper tantrums, poor school performance, and bullying are linked to antisocial behavior in adulthood. Furthermore, those who initiate delinquent behavior at an early age tend to commit crimes more frequently and for a longer duration than do those with a later onset. Indeed, early antisocial behavior often is viewed as the single best predictor of antisocial behavior in adulthood. A review of studies exploring this topic reported a substantial positive correlation (0.68) between early aggressive behavior and later criminality (Olweus, 1979). This stability in antisocial behavior has been demonstrated by using data from different countries and varied methods of assessment, including official records as well as teacher, parent, and peer reports of aggressive behavior (Caspi & Moffitt, 1993).

What causes the early propensity among some to engage in aggressive behavior? Gottfredson and Hirschi (1990) and others have argued that personal characteristics such as lack of self-control and a tendency toward impulsivity explain an early onset of antisocial behavior. Other research points to the importance of family factors in predicting problematic behavior in childhood and adolescence, in particular, low levels of parental supervision and involvement, a disciplinary approach that is both erratic and harsh, and weak attachment to parents (Loeber & Stouthamer-Loeber, 1986). Other possible explanations relate to school involvement and attachment, neighborhood factors (e.g., poverty), parental criminal involvement, and heredity.

Antisocial behavior in childhood may influence later behavior though multiple mechanisms. To the extent that personal traits such as low self-control do not change over time, they continue to affect behavior in later life (Gottfredson & Hirschi, 1990). Other researchers note that prior behavior may increase the probability of future problematic behavior either by weakening inhibitions or by increasing motivations (Nagin & Paternoster, 1991). For example, the process of being apprehended and officially sanctioned or labeled for antisocial behavior at a young age may propagate problematic behavior in the future by removing opportunities. Devah Pager (2003) documented the "mark of a criminal record," demonstrating that arrest and incarceration negatively affect future employment prospects.

All this research pointing to stability in antisocial behavior over time seems inconsistent with the notion that individuals desist from crime as they age. Yet stability and desistance are not mutually exclusive patterns. A substantial body of literature reveals that most antisocial children do not manifest similar problematic behavior in adulthood (Robins, 1978). These seemingly contradictory statistics can be reconciled by returning to the research design problem mentioned above: Most studies have been retrospective in design, beginning with adult criminals and tracing their behavior and experiences back in time. That approach excludes delinquent adolescents who eventually desist from

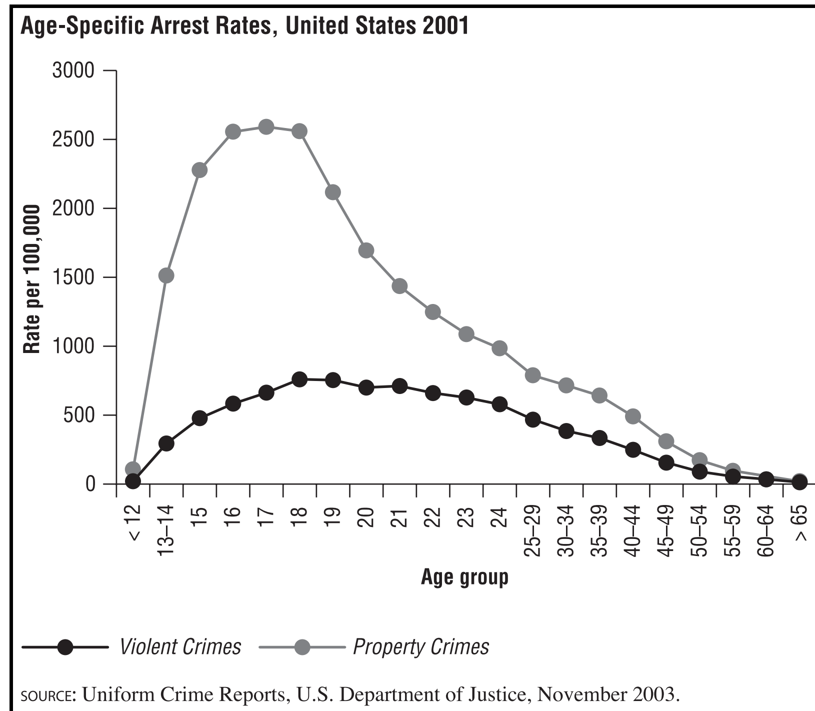


*Figure 1.* CENGAGE LEARNING, GALE.

crime. Although virtually all adult criminals experienced severe problems as children, most antisocial children grow up to become law-abiding adults.

## FACTORS THAT EXPLAIN DESISTANCE FROM CRIME WITH AGE

What factors determine whether antisocial children desist from or persist in criminal behavior in adulthood? Some argue that the causal mechanisms underlying criminal behavior differ in important ways for those whose problematic behavior is confined to late adolescence and early adulthood as opposed to those who persist into later adulthood. Moffit (1993), for example, argued that those on a career criminal path offend because of what she terms "early neuropsychological deficits" such as hyperactivity, impulsiveness, and low self-control. These qualities, which may be inherited or acquired, are exacerbated by poor family relationships and other environmental features but are largely immutable. In contrast, the motivation for offending among adolescent-limited offenders is rooted in peer influences or "social mimicry," forces that lose their sway once individuals reach adulthood.

However, evidence is accumulating that shows that criminal trajectories are not predestined in this way. Instead, certain key life events or turning points explain how and why many antisocial children and delinquent adolescents are able to change their life trajectories and desist from criminal behavior. Perhaps most influential in this regard is the work of Sampson and Laub (1993, 2005), which demonstrates how informal social controls that are exerted through institutions such as marriage, employment, education, and military involvement can promote changes in problematic behavior. Such turning points separate past history from the present, offer both supervision and monitoring, and provide structure, social support, and economic opportunities. These transformative events are linked closely to age and hence offer an explanation for the declining rate of criminal involvement with age.

Sampson and Laub's study resurrects life histories originally gathered by two Harvard researchers, Sheldon Glueck and Eleanor Glueck, between 1940 and 1965. The Glueck team gathered data on 500 highly delinquent youth and 500 control participants in the Boston area, matching them on several characteristics, including age, IQ, socioeconomic status, and ethnicity (Glueck & Glueck, 1950). The participants originally were followed from age 14 to age 32. Sampson and Laub tracked down some of those men and updated their life histories to age 70.

The analyses conducted by Sampson and Laub provide support for the stability of antisocial behavior. Men who experienced difficulties in childhood and adolescence were most likely to report problematic behavior in adulthood.

For example, 55% of those with an official record of delinquency before age 14 reported at least one arrest in midadulthood (between ages 32 and 45) compared with 16% of those without a record of official delinquency. However, the analyses also revealed that high-quality social bonds to important institutions, such as a close attachment to a spouse and expressed commitment to a stable job, are effective in promoting change. About a third of men who reported stable jobs and strong marital attachments at ages 17 to 25 were arrested between ages 25 and 32 compared with about three-quarters of men with low job stability and weak marital attachments.

Other research has led to similar conclusions. One study (Horney, Osgood, & Marshall, 1995), using retrospective survey data on more than 600 serious offenders, found that school attendance and living with a wife reduced the chances of reoffending in the short term in a sample of male felons. Another study, using prospective panel survey data gathered in the United Kingdom, indicated that delinquent youths who largely were reformed by adulthood had work records and marital relationships that were substantially better than those of chronic offenders. However, those individuals continued to report noncriminal deviant behavior such as heavy drinking and physical disputes (Hagan, 1993; Nagin, Farrington, & Moffitt, 1995).

Of course, an important question is whether such life events actually cause people to desist or whether the individuals most likely to desist anyway are those who obtain good employment and/or choose a stable, supportive partner. In other words, can it really be concluded that such life events actually cause desistance? Sampson and Laub (2003) provided evidence that suggests that the answer is yes, showing that the same person is less likely to offend when married than when unmarried even after controlling for age.

Christopher Uggen (2000) approached this issue by examining data gathered from a national work experiment for individuals with a criminal record. Offenders were assigned randomly to either a treatment group or a control group; those in the treatment group were offered minimum-wage jobs, and random assignment ensured that the nature of employment was not associated with personal traits such as work ethic and commitment level. The results revealed that participants age 27 or older in the treatment group were less likely to report crime and arrest than were those in the control group. However, for younger offenders marginal job opportunities elicited little change in criminal behavior. This study provides convincing evidence that, for older offenders at least, employment is in fact an effective turning point.

## FUTURE RESEARCH DIRECTIONS

Past research on adult criminal activity, which is quantitative in nature and typically relies on official statistics (arrest data) or self-report data, has provided much information about how childhood circumstances and key life events such as employment and marriage affect criminal trajectories. What is less well understood is the role of human agency—the degree to which individuals actively make their own decisions about the course of their lives—and how those individual decisions interact with environmental factors to affect criminal trajectories (Sampson & Laub, 2005). Qualitative research would complement quantitative data in this regard. Moreover, future research that attempts to incorporate both self-reports and official measures of offending and considered other types of deviant behavior, such as domestic violence, would further understanding of adult criminal activity (Piquero & Mazerolle, 2001). Also, the degree to which other life events such as the discovery of religion affect criminal involvement is not well understood, nor are the main life events that contribute to persistence in rather than desistance from crime.

## INTERVENTION STRATEGIES

The mechanisms through which crime begins and persists suggest two alternative paths for intervention and prevention. To the extent that problematic behavior in childhood contributes to difficulties in adulthood, one set of strategies focuses on targeting youths and their families as early as possible. Programs such as the Seattle Social Development Project, which promotes strong bonds between children, families, and schools, and the Montreal Longitudinal-Experimental Study, which focuses on parent training (e.g., literacy, effective discipline strategies), have had success. Youths participating in those programs exhibited significantly lower levels of delinquency and substance abuse at older ages than did similar youths not involved in the programs (Hawkins, Kosterman, Catalano, Hill, & Abbott, 2005; Tremblay et al., 1992). Nurse home visitation during pregnancy and continuing through infancy also proved effective: Fifteen-year follow-up results show that adolescents from single-parent, economically disadvantaged homes who received nurse home visits report lower levels of official delinquency, substance abuse, and truancy than do those in control groups (Olds et al., 1998).

The other strategy for reducing criminal activity focuses on adults to ensure that protective social bonds are not severed. Community-based corrections, such as residential community institutions, home confinement programs, and day reporting centers, may be most successful in this regard. Laub and Allen (2000) argued that such community incarceration programs emphasize surveillance but also recognize the importance of treatment, such as job training and employment, education, and family counseling. Evidence shows that education and vocational training improve the prospects of employment and reduce reoffending rates. The participants in one such program, the Court Employment Project, could have their criminal charges dropped if they

completed 90 days of a job training and placement program. Offenders who successfully completed the program did appear somewhat less likely to reoffend (Bushway & Reuter, 1997). These community-based strategies are in direct contradiction to the current emphasis in the U.S. criminal justice system on incarceration, which may increase the likelihood of crime by severing social ties to family and work, which are important for changing criminal trajectories over the life course.

**SEE ALSO** Volume 1: *Child Abuse; School Violence;* Volume 2: *Crime and Victimization, Adulthood; Domestic Violence; Incarceration, Adulthood;* Volume 3: *Elder Abuse and Neglect*

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*Julie A. Phillips*

# CRIME AND VICTIMIZATION, ADULTHOOD

Although victimization has a clear reality in the public mind, efforts to provide a coherent and comprehensive definition have proved notoriously difficult. Most social scientists view victimization in the context of physical

attacks on individuals (e.g., assaults, sexual assaults, and murders), the destruction or unwanted removal of property (e.g., vandalism, theft, break and enters), or some combination of the two (e.g., robbery, kidnapping). Still, such definitions are almost always incomplete or contested as seen in descriptions of emotional abuse, pet abuse, or stalking, to name only a few.

Nevertheless, for the most part, victimization (as it is generally measured) is a rare event. Only a select segment of any population is victimized in any given year and fewer, still, experience more frequent or severe incidents such as violence. Thus viewing victimization as a random and perhaps fleeting occurrence is natural. However, the age grading of victimization risk is very strong and the extent and type of this risk is closely connected to adult social roles. Moreover, the experience of victimization may in turn affect how an individual's life course unfolds, with negative consequences for his or her life chances.

## LIFE COURSE ANTECEDENTS OF VICTIMIZATION

Research consistently shows that the likelihood of criminal behavior increases steadily through the teenage years, peaks in late adolescence or early adulthood, and then declines steadily with advancing age. Whether this age pattern is the same across times and places has been hotly debated (Blumstein, Farrington, & Cohen, 1988); however, the age grading of crime seems indisputable.

The relationship between age and victimization is much more complex, however. Both social science and public discourse focus considerable attention on specific types of victims defined largely in terms of age. The victimization of children and the elderly is the subject of a great deal of this attention. Likewise, laws often target age-specific victimizations; Megan's Law, for example, requires the identity of persons convicted of sex offenses against children to be made public. Similarly, the Texas Penal Code, like other states, specifically criminalizes someone who "intentionally, knowingly, recklessly, or with criminal negligence, by act or intentionally, knowingly, or recklessly by omission, causes to a child, elderly individual, or disabled individual ... serious bodily injury, serious mental deficiency, impairment, or injury, or bodily injury." In light of such interest, it is not surprising that organizations, such as the National Center for Missing and Exploited Children or the National Center on Elder Abuse, exist to increase public awareness and advocate on behalf of young and old victims of crime.

The difference between age patterns of crime and age patterns of criminal victimization reflect the fundamental belief that *vulnerability* is key to understanding victimization. The assumption is that people are victimized because they lack the personal and social resources to prevent their victimization. Yet, this perception ignores the importance of factors that put potential offenders and potential victims together in time and space. Sociologists Larry Cohen, James Kluegel, and Kenneth Land (1981) describe an opportunity model of crime victimization that emphasizes the importance of *proximity*, *exposure*, *guardianship*, and *attractiveness* as key determinants of victimization. Proximity refers to an individual's distance to pools of potential offenders, whereas exposure refers to activities that put potential offenders and potential victims in the same place. Guardianship, a potentially countervailing influence, is the capacity of individuals or their circumstances to prevent victimization by increasing resistance, difficulty, or the likelihood of detection. Finally, attractiveness is the relative symbolic or material value of a given target for a potential offender. An attractive target may simply be someone who looks like they have more money or a nicer house or car. Some even speculate that the overall volume of attractive targets has increased in recent decades with the literal explosion of portable electronic devices such as cell phones, BlackBerries, iPods, and so forth. Importantly, age and life course stage shape these determinants in complex ways, which makes predicting the age pattern of victimization difficult. Still, a number of key themes are important in understanding victimization.

If the risk of victimization increases when potential victims share time and space with potential offenders, then people who are close in age or share a similar lifestyle with potential offenders should be at greatest risk. Given the age pattern of crime, a natural expectation is that people in the age group at which crime rates are highest are most at risk of victimization and indeed considerable research bears this out. In 2007, the Bureau of Justice Statistics reported that rates of violent victimization increased from 47.3 per 1,000 for those aged 12 to 15 to 52.3 for those aged 16 to 19 but then declined steadily with advancing age (Rand & Shannan, 2007). People ages 50 to 64 had a rate of violent victimization approximately one-quarter (13.1 per 1,000), while persons age 65 or older had a rate almost one-fifteenth of those in their teenage years (Rand & Shannan, 2007). When considering property victimization, the story is the same. Heads of households between the ages of 12 and 19 have victimization rates of 370 per 1,000 compared with only 70.3 for heads of households 65 or older. In general, data from a wide variety of sources, time periods, and countries show that victimization is strongly concentrated in the adolescent years.

However, the story does not begin and end with adolescent victimization risk. Also important is how unfolding social roles shape victimization risk over time. Such a view is anticipated in one of the earliest statements of victimization risk, where Michael Hindelang, Michael Gottfredson, and James Garofalo (1978) argued that the idea of *lifestyle* is the key determinant of

victimization. In their view, lifestyle refers to the broad pattern of relationships and activities that constitute the core features of an individual's everyday life. Lifestyle is strongly connected to the social roles that people occupy, especially to those that signal the transition to adulthood and give shape to the unfolding life span. How and when people exit from schooling, enter the workforce, get married or begin cohabiting, have children, and leave the parental home all have an impact upon their likely exposure to crime by virtue of the lifestyles they promote. These factors also influence proximity and exposure to potential offenders, as well as guardianship and attractiveness.

Educational roles are a good example. The number of years spent in formal education has increased in the United States. For many, this involves movement into and through higher education and the completion of two- and four-year degrees in the early to mid-20s. For others, schooling is less linear and involves movement into and out of educational institutions, often switching programs and colleges, throughout one's 20s and even into one's 30s. Although the extension of formal schooling has many life course implications, a particularly important one is that the period in which individuals are proximate and exposed to potential offenders also is extended. Although institutions of higher learning are quite safe in comparison to other social spaces, despite recent high-visibility campus shootings, there is also evidence that college students have higher than expected risks. College worlds seem particularly conducive to alcohol related assaults, date rape, and various forms of personal theft.

Another key feature of adulthood is the movement into full-time work. Work is related to victimization in a variety of ways, the two most significant being work-related victimization and socioeconomic inequality in victimization risk. In the former case, considerable violence actually occurs in and around workplaces. Data from the National Crime Victimization Survey (NCVS) indicates that 8% of rapes, 7% of robberies, and 16% of assaults occurred while victims were working or on duty (Bachman, 1994). Moreover, a person's type of work also matters, in that victimization rates appear particularly high in restaurant, bar, and nightclub settings. More generally, criminologist James Lynch (1987) concluded that jobs that involve high amounts of face-to-face contact, the handling of money, and mobility between locations were particularly conducive to victimization. Not surprisingly, research on homicide shows that the risk of being murdered is significantly elevated among cab drivers, bartenders and waitresses, and clerks in convenience stores.

In addition to shaping the kinds of activities in which individuals are involved, jobs are a foundation of socioeconomic status. As such, jobs affect the likelihood of victimization by shaping the types of neighborhoods people live in, the types of housing they have, the private or public transportation available to them, and their capability to buy protections helping prevent their victimization. However, the relationship between socioeconomic status and victimization risk is complicated. In terms of proximity, money should be able to buy distance and those with more resources should be better able to insulate themselves from potential offenders. Similarly, greater resources should also increase guardianship, as those with more resources are better equipped to purchase protections such as private parking or home security. At the same time, people with more resources usually have more valuable possessions, which increases their attractiveness to potential offenders. More resources also increase people's ability to purchase leisure, increasing exposure as well. These countervailing forces play out differently for various types of victimization risk, so that the relationship between risk of victimization and socioeconomic status varies by type of victimization. For example, the risk of rape victimization is particularly high among those who earn less than $15,000 per year (U.S. Department of Justice, 2003). The pattern is even more pronounced for robbery and assault; those with incomes of less than $7,500 per year have double the risk of victimization of the next highest income group. In contrast, there is no clear relationship between socioeconomic status and risk of personal theft; victimization rates are similar across income categories.

Marital status has a complicated relationship to victimization risk. On one level, being married is generally associated with lower risk of predatory crimes, such as stranger assaults, robberies, and personal theft. According to data from the NCVS, married persons have one-quarter the risk of violent victimization compared with persons who never married (Catalano, 2006). Similar, if not more extreme, differentials appear for rape, robbery, aggravated assault, and personal theft. The complexity of the relationship is revealed by examining the risk of separated and divorced persons, whose risk of victimization for rape, robbery, or aggravated assault is similar to the risk of persons who never married, even though the former are typically much older than the latter and presumably have less exposure to potential offenders.

The question of why formerly married people have such high rates of victimization highlights the unique opportunities and circumstances of marriage that might foster violence between partners, violence that is typically not well-measured in national crime surveys such as the NCVS. As a result, researchers often turn to studies that focus on violence among intimate partners: Studies such as the National Violence against Women Survey (NVAWS), for instance, reveal that there is considerable violence between intimate partners, that women have considerably

higher rates of victimization than those shown in traditional crime victimization surveys, and that women who are leaving or have left a relationship are particularly likely to experience violence (Tjaden & Thoennes, 2000). Thus, whereas marriage decreases some forms of victimization by altering individuals' lifestyles and routine activities, it also increases other forms of victimization by situating individuals in a unique social relationship with norms, expectations, and practices that may elicit, and perhaps even allow and encourage, the use of violence.

## LIFE COURSE CONSEQUENCES OF VICTIMIZATION

Although life course events affect the risk of victimization, experiences of victimization are nevertheless concentrated in adolescence and early adulthood. The experience of violence, both social and psychological, has the potential to shape life course outcomes by altering the ways in which individuals approach the world and its challenges and opportunities and even the extent and type of relationships that one has (Macmillan, 2001). One particularly prominent vein of research focuses on exposure to violence in early life, be it violence from strangers, peers, or kin, and the likelihood of it resulting in mental distress and poor psychological well-being. Indeed, a core explanation of mental distress focuses on the presence of life stressors of which exposure to violence is a salient theme, regardless of whether the focus is on broad life course linkages such as that between early childhood and later adulthood (Kessler & Magee, 1994) or on life stages such as adolescence (Hagan & Foster, 2001) or old age (Harrell et al., 2002).

An equally provocative literature focuses on the relationship between victimization and offending. Although it is well-established that involvement in crime and deviance dramatically increases risks of victimization, there is also compelling work that views victimization as a precursor to crime. Some suggest that victimization produces the impetus for revenge, whereas others speculate that victimization may induce nihilistic or anomic feelings that neutralize anticrime values (Singer, 1986). Still, there is much more work to be done given the problem of embeddedness where those whose lifestyles involve crime may be more likely to offend and be victimized by virtue of how they spend their time and who they spend it with. Yet what seems clear is a strong association between victimization and offending over the life span (Macmillan & Hagan, 2004).

With effects on mental health and involvement in crime and deviance, it is not surprising to imagine further effects victimization has on other life course trajectories. Recent years have seen the emergence of two streams of work. One area of study is the impact of victimization on social relationships. Constance Fischer (1984), for example, argues that victimization upsets and undermines people's world views and helps foster mindsets where individuals are seen as predators rather than allies and sources of threat rather than safety. Although the social network implications of this are largely speculative, some work by Andrew Cherlin and colleagues (2004) suggests that physical and sexual abuse in relationships has important effects on the character and likelihood of subsequent relationships. Although further study is clearly necessary, evidence is emerging that victimization shapes social relationships in profound ways.

A final area of study examines the relationship between victimization and trajectories of educational and occupation success. Building off the work of Fischer and others, Ross Macmillan (2000; 2001) proposed a theoretical model that viewed the immediate consequences of victimization as threats to agency and long-term orientations and investments. From these consequences stemmed lower aspirations and less investment in educational endeavors such as homework. This further leads to poorer educational performance and lower grades and lower educational attainment in general. As educational attainment is the lynchpin of socioeconomic attainment, victimization ultimately undermines labor force participation, occupational prestige, income, homeownership, and risk of poverty. Indeed, analysis of high-quality data showed widespread socioeconomic consequences of adolescent victimization in the transition to adulthood (Macmillan & Hagan, 2004).

Although studies of the consequences of victimization are comparatively new relative to studies of victimization risk, there is an impressive and increasing body of evidence that shows victimization in adolescence to be part of a chain of adversity where early experiences shape the character and content of later experiences, with exposure to violence being a recurring feature of an individual's life course and thus dramatically diminishing quality of life. In some respects, early adversity puts people at risk for victimization, which contributes to cycles of disadvantage. In other respects, victimization may constitute a turning point in the life course and derail trajectories of success. In both respects, it appears an important element in the structuring of the life course.

**SEE ALSO** Volume 1: *Child Abuse; School Violence;* Volume 2: *Crime, Criminal Activity in Adulthood; Domestic Violence; Incarceration, Adulthood;* Volume 3: *Elder Abuse and Neglect.*

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***Ross Macmillan***

# CULTURAL CAPITAL, ADULTHOOD

SEE Volume 1: *Cultural Capital.*

# CULTURAL IMAGES, ADULTHOOD

Cultural images of adulthood, or the prevailing ideas about what it means to be an adult in a particular society, have not been researched systematically by social scientists. Knowledge of these images might provide a framework in which to monitor social change in a variety of areas, including intergenerational relations, age consciousness, lifestyles, gender and ethnic inequalities, and the life course.

The few historical analyses of these images are impressionistic rather than being based on rigorous statistical techniques. Cultural images could be studied by using content analyses of the depiction of adults on television, in movies, and in novels, but no studies of this type have been reported in the literature. Nonetheless, the impressionistic reports are a useful point of reference. Perhaps the best place to start in understanding the evolution of cultural images of adulthood is with an examination of the etymology of the word *adult*.

## ETYMOLOGICAL ANALYSIS

An etymological analysis suggests that adulthood as it is known in Western countries is a cultural artifact. This is demonstrated by the fact that in most languages the idea is not important enough in cultural life to require a word to express it. Even among the European languages only English has a specific word designating a distinct stage of the life course as adulthood. In fact, it appears that the differentiation of the life course that occurred in the modern period created the need for a lexicon to describe it, with the term *adult* following a similar etymological path to that of other terms that represent the life course. For example, the word *adult* first appeared in the language in 1656, but it is instructive to note that it is derived from the Latin *adultus* (grown), which is the past participle of *adolescere* (to grow up, mature). The term *adolescent* came into English usage in the 1400s, a half century earlier than the word *adult,* whereas *adulthood* did not appear until 1870 (Côté, 2000; Merser, 1987).

This etymological analysis suggests that historically, people did not make the age distinctions that Anglophones and others do now. These age distinctions appear to be the result of the rise of modernity: the massive social, economic, and technological transformations of the last

several hundred years. Those transformations altered social institutions, and as those institutions changed, so did people's lives: People lived longer and were healthier, and adults were less likely to raise large numbers of children. Those changes led to the formation of age groups whose members were similar to one another but distinct from the members of other age groups. Thus, people of different ages became different in terms of social roles and responsibilities as well as social expectations about cognitive and emotional attributes.

According to Cheryl Merser (1987), the relatively recent appearance of a word to describe adulthood suggests that people needed a way to depict the new social conditions they faced, especially increasing uncertainty and the need to make life-altering choices. Traditionally, most people had little choice about how their lives played out. Regardless of their age, people were bound by duties and obligations to fulfill ascribed family and community roles. Young and old alike were expected to work for a common welfare regardless of their personal preferences. However, Merser argued, the rise of uncertainty and the consequent need to know more about the world to be able to make choices gave new meaning to the notion of maturity and widened the gap between those with little experience (children) and those with more experience (adults). The process was hastened by the decline of absolute religious authority and the rise of secular authority; people increasingly were seen as responsible for their own destinies and choices.

## CHANGING IMAGES OF MATURITY

In a 1978 essay about the study of adulthood, "Searching for Adulthood in America," Winthrop Jordan explored the changing meaning of adulthood in the United States. In his search of the archives that chronicled early English settlers in the United States, Jordan found little evidence that people held images of different stages of the life course. Instead, he found references to the roles and duties assigned to husbands, wives, children, and servants. Within those roles there was no reference to growth, maturing, or psychological needs and preferences. Among Puritans, for example, people were compelled to know their existing conditions, not to change those conditions. Jordan argued that the decline of patriarchy made way for binary ideas about personality characteristics such as maturity-immaturity and mastery-dependence. Increasingly, family members other than the dominant male gained status and rights, and so people were defined less in terms of their roles and duties and more as individuals with needs and potentials.

In addition, Jordan argued, in the past concern about gender roles overrode age roles in the sense that the dominant images were of manhood and womanhood as distinct but complementary states. Accordingly, it was more important to distinguish males from females than to distinguish children from adults. Over time that changed, with age roles and distinctions gaining importance in relation to gender distinctions. In other words, in early American history it appears that women and men had more in common with those of the same sex regardless of age; over time adult men and women came to have more in common with one another than with children of the same sex.

Complementing those trends was a fall in both fertility and mortality rates. When there were fewer children to raise, each child could receive more attention. At the same time more parents lived to see their children leave their homes. Therefore, a period of the life course without dependent children became common and people could turn their attention to themselves and reflect on their psychological states and needs. Jordan argued that with the rise of the social sciences in the 20th century a technical language emerged that labeled the life stages of childhood, adolescence, and adulthood as real rather than as historically produced and changeable cultural experiences.

From Jordan's historical analyses of the changing ideas of adulthood it is possible to trace the emergence of the fault lines associated with contemporary age consciousness, especially in terms of being a nonadult ("becoming" and "incomplete") versus an adult ("arrived" and "complete") (Wyn & White, 1997). Cultural images of the differences between these age statuses now apparently vary by dimensions such as immature-mature, selfishness-selflessness, and ignorant-knowledgeable.

## IMAGES IN THE MASS MEDIA

With the rise of the mass media in the 20th century social scientists were drawn to study various forms of (mis)representations of men and women (Lindsey, 2005) and various ethnic groups (Basow, 1992). For example, men are overrepresented in the proportion of characters, especially those who play a significant role in the outcome of plots, and both males and females are depicted in gender-stereotyped manners: Adult females tend to be linked to home and family roles, whereas adult males are linked to more power-oriented roles and goals, including self-indulgence, wealth, and revenge.

However, little attention has been paid to the representations of adults per se as characters in the mass media, perhaps because adulthood is taken for granted as a self-evident phase in the life course. Still, one can find evidence of the new age consciousness being fed by media that target different age groups. For example, programming directed at young people, especially in forms such as MTV, can depict adults as boring, stupid, and pretentious. Mark Crispin Miller (2001) argued that in rock video imagery

***The Cosby Show.*** *Bill Cosby, as Dr. Cliff Huxtable of "The Cosby Show," listens to a point made by his grandson Gary Gray, as his granddaughter played by Jessica Vaughn looks on.* AP IMAGES.

"parents are creeps, teachers are nerds and idiots, [and] authority figures are laughable."

Taking this line of thinking further, Marcel Danesi (2003) contended that some of the mass media have encouraged a "dumbing down" of cultural images as a way to appeal to the rising youth market and that this approach influences self-conceptions among narcissistic adults who do not want to grow up. In the youth-oriented television programming of the 1980s and 1990s parents were caricatured in ways that corresponded to rebellious adolescent views: shallow in their self-absorption and inept in their ability to make decisions for the family. These images stand in sharp contrast to programming of the 1950s, in which parents were depicted as firm, caring, and ultimately knowing best. These more recent forms of mockery became possible, according to Danesi, because of the overall obsession of contemporary culture with youthfulness and attempts by adults to avoid the commitments and duties attached to their adult roles, including controlling the media images that influence their children. Juliet Schor (2004) attributed some of these changes to marketers who have created "a sophisticated and powerful 'antiadultism' within the commercial world" (Schor, 2004, p. 51) by depicting adults as forcing "a repressive and joyless world" on children who just want to be left in peace to play with their newly acquired consumer items.

However, television programming in the early 21st century has been replete with heterogeneous images of adults depicted for other adults. It has become commonplace for adults to remain happily unmarried (*Friends*), gay relationships are depicted openly (*Will & Grace*, *Desperate Housewives*), and single women take on the predatory role in dating that men once were shown to hold (*Sex and the City*, *Desperate Housewives*). In addition, there have been more depictions of married couples in egalitarian relationships (*Medium*) and a trend toward showing wives who are more educated and successful than their spouses (*Commander in Chief*).

## FUTURE RESEARCH

These historical and impressionistic analyses suggest that the study of adulthood and its cultural images is a potentially rich area of research awaiting more rigorous techniques such as content analysis of contemporary mass

media and archival material from past eras in the form of diaries, literature, plays, and fine art. Adulthood as it is socially constructed is the longest and least studied portion of the life course. The 21st century probably will see increased research efforts devoted to helping people understand the images they hold of adults, especially as those images contrast with images of other age groups.

**SEE ALSO** Volume 1: *Age Norms; Cultural Images, Childhood and Adolescence; Identity Development;* Volume 2: *Consumption, Adulthood and Later Life;* Volume 3: *Cultural Images, Later Life.*

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***James E. Côté***

# D

## DATA SOURCES, ADULTHOOD

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### I. GENERAL ISSUES

Much of what social scientists know about the life course has been learned from social surveys. Family formation, employment, political preferences and behavior, health and psychosocial adjustment, housing preferences, and health and well-being have all been studied by asking people questions in the context of sample surveys. A sample survey is defined as a formal questionnaire (the survey) that is administered to a group of individuals selected in a statistically valid way (the sample). The goal of a sample survey is to not only obtain answers to questions from the respondents (as the individuals who answer survey questions are called) but also to have these answers represent the answers of the larger group of people from which the sample is drawn (the population). This is possible because when certain methods of selecting respondents are used, researchers can utilize the respondents' answers to estimate (or infer) the answers for all members of the population. This procedure is called *statistical inference*.

Several types of survey designs are useful in life-course research, particularly repeated cross-sectional surveys and longitudinal (sometimes called panel) surveys. The dense sets of personal events that characterize adulthood are often difficult to capture using a questionnaire, but modern advances in survey technology, such as using personal computers or the World Wide Web, have improved researchers' capabilities. In all steps in the survey process, there are also many sources of error that can affect both the accuracy of the information gathered and the validity of inferences made from respondents to a population.

#### SAMPLE DESIGN, SAMPLING FRAMES, AND METHODS OF COLLECTING DATA

Most sample surveys rely on the science of statistics to ensure that the respondents chosen for the survey represent the population of interest. Probability samples are

defined as those survey samples in which the probability of selection into the survey is known for every respondent. There are many types of probability samples, including simple random, stratified, and clustered samples. Stratified samples are used for a variety of purposes, the most important of which is to ensure that a sufficient number of individuals with characteristics relatively rare in the population are included. Most of the large surveys conducted by the federal government of the United States use stratified sampling techniques to ensure adequate representation of ethnic and racial minority populations. Research comparing people with different characteristics requires adequately sized samples of all groups. Thus, stratified sampling is an important tool for making research successful.

To ensure that survey respondents are selected with a known probability, survey professionals must have some method for knowing the potential universe of respondents available to be surveyed. This universe is called a *sampling frame*. A sampling frame should be as complete a listing of the entire study population as possible. Individuals are then selected from this list with some known probability depending on the sampling strategy. *List frames* are simple lists of individuals generated from some source. State driver's licenses, birth and death certificates, mailing lists, and lists of postal addresses are all used by the survey staff to generate a sampling frame. An *area frame* is based on geography rather than a listing of names. Within census groupings such as county, census tract, and census block group, households are listed and then selected using a sampling technique. *Nonlist frames* are used in the case of random digit dial phone surveys. In this case, all households with telephones are considered eligible for interview and are selected with known frequency using random digit dialing technology.

Not all surveys are designed to be representative of the population or to allow for valid inference to a more general population. In nonprobability sample surveys, respondents are chosen by methods other than scientific sampling. These methods include, among others, *convenience* and *snowball sampling*. Convenience sampling means selecting respondents who are close at hand, whereas snowball sampling uses social networks of friends and neighbors to identify respondents. There are many good reasons to use nonprobability samples, including the relatively low cost and studying a population that is difficult to list. Inference about more general population trends from answers to these types of surveys, however, should be limited.

Finding and selecting respondents are the first two steps in survey design. These two steps affect how representative respondents are of the population. The third step is to choose the method of data collection used to gather the information, which includes the means used to ask questions and the technology used to record answers. Interviewer-administered questionnaires can be delivered in person or over the phone. Computers can be used to record the answers and help improve data collection and data quality. Self-administered questionnaires can be on paper, in e-mail, or on Web-based forms. The different methods of collecting data have different strengths and weaknesses.

Three main criteria are used to select a method for administering a questionnaire; the first is cost consideration. Interviewer-administered questionnaires are expensive yet likely to yield higher response rates and more accurate data. The second criterion is the complexity of the questionnaire. For data on the life course, such as that involving complex employment or marital histories, interviewer-administered instruments tend to be more successful because respondents are guided through questions in a systematic way. The third criterion for selecting a data-collection method is the sensitivity of the topic matter. Respondents are often more at ease when allowed to answers questions about sensitive topics such as drug and alcohol use, sexual history, or illegal activity without the intervention of an interviewer (Groves et al., 2004).

In all stages of the survey process, error is introduced, which affects both the quality of the data and the statistical inference for which it is used. Much of survey design and administration are focused on reducing error in all aspects of data collection. Three types of error, in particular, affect most inference and analysis of survey data. *Sampling error* is the error introduced into inference by collecting data on only a subset of the population of interest. The smaller the subset of the population drawn, the larger the sampling error. The importance of sampling error is that it diminishes the precision with which conclusions from survey data can be drawn. In studies of the prevalence of particular characteristics, diseases, or opinions, the concern is how precise the estimates of these characteristics are; thus, the size of the underlying sample is highly relevant. *Nonresponse error* arises when the chosen respondents do not return a survey or ignore repeated attempts to be interviewed. Nonresponse error is critically important when those who do not respond to the survey request are different than those who do. For instance, a survey of mothers of young children about attitudes toward the transition to motherhood that yields a much higher response rate among women who stay at home with their first child might well give a biased understanding of the feelings of new mothers because of the preponderance of women who are home in the sample (Groves, 2006). *Measurement error* is another important source of error in survey data. This type of error arises when the questions asked do not capture the concept of interest.

### STUDYING ADULTHOOD THROUGH DIFFERENT FORMS OF SURVEY DESIGN

Surveys are often specifically designed to address the issues associated with adult life transitions. Two survey designs, in particular, are often used to understand how individuals move through the life course. *Cross-sectional surveys* are designed to take a "snapshot" of a large group of individuals in a single time period. To understand different life stages, individuals from different age groups at the time of the survey are used to represent those life stages. For instance, to understand how marital quality changes with age, responses in a cross-sectional survey from people of different ages are used to represent how feelings about marriage change with aging. *Repeated cross-sectional surveys*, in which different individuals are asked the same questions in more than one time period, allow expanding the understanding of life transitions by introducing the effect of historical period. In the above example, perhaps the same marital quality questions were asked in 1985 and 2005; then the way aging effects marital quality in the two time periods could be compared to see if changes in social norms influence how marriage quality varies with age. The difficulty with using either cross-sectional or repeated cross-sectional data to understand adult transitions is clear. Individuals in different age groups with very different life experiences are used to represent the biography of a typical person. Cross-sectional data confuses the process of individual aging with the experience of a cohort in history.

Another method of collecting data to understand the life course of adults is a longitudinal (panel) study. In this case, respondents are interviewed more than once. In some of the large longitudinal studies conducted by the U.S. government, respondents have been followed for more than 30 years. The ability to follow individuals through the life course has greatly enhanced the understanding of adulthood. However, the methodological difficulties of longitudinal data collection do cause some inferential problems for life course analysis. Differential panel attrition—that is, the loss of people who cannot be found after one or more panels—can bias inference because individuals who stay in a survey tend to be different from the ones who leave. Studying marriage with longitudinal data, for instance, is made difficult because those who divorce are much less likely to be found in the next wave of data collection. Those persons who remain are then less likely to represent the original population. Nevertheless, longitudinal data provide important insights into the dense processes of employment, marriage, and family formation in the adult life course (Singleton & Straits, 2005).

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***Felicia B. LeClere***

## II. AMERICANS' CHANGING LIVES (ACL)

The Americans' Changing Lives (ACL) study has been an important source of data for understanding the structural and psychosocial context of life course processes. This four-wave panel survey of a nationally representative sample of U.S. adults was conducted under the direction of sociologist James S. House at the University of Michigan and was funded by the National Institute on Aging. Beginning in 1986, face-to-face interviews were conducted with 3,617 men and women between the ages of 24 and 96. Blacks, adults ages 60 and older, and married women whose husband was over age 64 were oversampled. Follow-up interviews were conducted in 1989 ($n$ = 2,867), 1994 ($n$ = 2,562), and 2001, 2002, or 2003 ($n$ = 1,787).

Among the broad range of topics addressed, several are particularly relevant to life-course development and change. These include mental and physical health (self-assessed health, mortality, health behavior, health-care utilization, depressive symptoms), social relationships (quantity and quality), and stress exposure. Also included are sociodemographic characteristics such as household composition, marital status, sex, race/ethnicity, employment, income, and religious practices.

The ACL data have made substantial contributions to the literature on social processes and health over the life course. An influential body of work by House and colleagues uses the ACL to examine the age patterning of socioeconomic disparities in health (House et al, 1990; House, Lantz, & Herd, 2005; House et al, 1994; Lantz, House, Mero, & Williams, 2005; Robert & Li, 2001). The data have also been used to identify life-course variation in a range of outcomes, including depressive symptoms, personal control, volunteering and other productive activities, and the nature and quality of marriage and other personal relationships.

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***Kristi Williams***

## III. CURRENT POPULATION STUDY (CPS)

The Current Population Survey (CPS) is a nationally representative study of households in the United States that has been conducted monthly since 1940. In addition to providing the government's official statistics on unemployment, the survey examines many key features of the life course, including schooling, marriage, fertility, and civic involvement. As a long-standing panel study, the CPS is particularly useful for describing time and cohort trends.

The CPS has a panel structure with an embedded longitudinal component. Each month, a new panel of 60,000 households is selected and surveyed for two periods of 4 months each with an 8-month interval between surveys (U.S. Census Bureau, 2006). The survey is most commonly used for time-series analysis of monthly panels across years, but individual-level longitudinal analysis can also be conducted by matching respondents across months.

Basic questions about household structure and employment are asked of all members of the household over the age of 15 years. In certain months, supplemental data are collected on such wide-ranging topics as fertility, voting, and tobacco use. The most used supplement is the Annual Social and Economic Supplement on employment, income, and health insurance conducted in March.

Many key demographic shifts have been documented and explained using CPS data, including increased returns to schooling and wage inequality (e.g., Juhn, Murphy, & Pierce, 1993), female labor force participation and the gender gap in wages (e.g., O'Neill & Polachek, 1993), and the growth of single parenthood (e.g., Eggebeen & Lichter, 1991). Other studies have used the CPS to identify the determinants of adolescent smoking (e.g., Farkas, Distefan, Choi, Gilpin, & Pierce, 1999), children's health insurance coverage (e.g., Dubay & Kenney, 1996), and preschool enrollment (e.g., Bainbridge, Meyers, Tanaka, & Waldfogel, 2005).

The Census Bureau provides CPS data and extraction software at no cost (http://www.census.gov/cps/). Unicon Research Corporation sells *CPS Utilities*, a version of the data formatted for time-series analysis (http://www.unicon.com).

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## IV: GENERAL SOCIAL SURVEY (GSS)

The National Data Program for the Social Sciences (NDPSS) has been conducted since 1972 by the National Opinion Research Center (NORC)/University of Chicago, with the support of the National Science Foundation. Its two main goals are to conduct basic scientific research on the structure and development of American society and to distribute up-to-date, important, high-quality data to social scientists, students, policy makers, and others.

These goals are carried out by a data-collection program that monitors societal change within the United States using the General Social Survey and compares the United States with other nations as part of the International Social Survey Programme. The NDPSS is directed by James A. Davis (NORC/University of Chicago), Tom W. Smith (NORC/University of Chicago), and Peter V. Marsden (Harvard University).

Data on societal change in the United States is collected as part of the General Social Survey (GSS). The GSS has been conducted 26 times from 1972 to 2006. It is the only full-probability, personal-interview survey designed to monitor changes in both social characteristics and attitudes in the United States. More than one thousand trends have been tracked since 1972. Age groups can be compared across time; changes within birth cohorts across the life cycle can be analyzed. Among the many topics covered are civil liberties, crime and violence, intergroup tolerance, morality, national spending priorities, psychological well-being, social mobility, and stress and traumatic events.

Cross-national data are collected as part of the International Social Survey Programme (ISSP). ISSP was established in 1984 by NORC and other social science institutes in the United States, Australia, Great Britain, and what was then West Germany. The ISSP collaboration has grown to include 43 nations. ISSP is the largest program of cross-national research in the social sciences. More information on ISSP is available at its Web site.

The GSS has carried out an extensive range of methodological research designed both to advance survey methods in general and to ensure that the GSS data are of the highest possible quality. More than 110 papers have been published in the GSS Methodological Report series. GSS data and documentation are available at the GSS Web site.

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***Tom W. Smith***

## V. LONGITUDINAL STUDY OF GENERATIONS (LSOG)

The Longitudinal Study of Generations (LSOG) provides life course scholars the unique opportunity to explore intergenerational relationships as experienced by four distinctive cohorts of men and women. The LSOG began in 1971 as a cross-sectional study of 358 three-generation families, comprising more than 2,000 individuals in southern California. This initial sample was obtained through a multistage stratified sample of grandfathers enrolled in a large, southern California health maintenance organization (HMO), as well as the men's descendants. Each three-generation family included grandfathers (then in their 60s), their middle-aged children (then in their early 40s), and their young adult children (then ages 16 to 26). These three generations are referred to by the study investigators as G1, G2, and G3, respectively. Spouses of family members in each generation also were surveyed. The study was unique at the time of its inception, because respondents were linked to each other on the basis of their shared family membership, and thus data analysts could examine parent-child, grandparent-grandchild, sibling, and spousal relationships. As a result, the LSOG's measures are considered the gold standard for studying family solidarity and intergenerational relationships.

Since 1985, interviews have been conducted at 3-year intervals with persons from G1, G2, and G3. In 1991, a fourth generation (G4) of Generation X young adults (i.e., those born between 1960 and 1979) was added to the study and followed up on at 3-year intervals. An extensive collection of LSOG materials is available at the University of Southern California Web site or at the Inter-university Consortium for Political and Social Research (ICPSR) at the University of Michigan Web site.

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***Merril Silverstein***

## VI. MIDLIFE IN THE UNITED STATES (MIDUS)

In 1995–1996, the MacArthur Midlife Research Network carried out a national survey of more than 7,000 non-institutionalized Americans in the contiguous United States, aged between 25 to 74 years old, called the National Survey of Midlife Development in the United States (MIDUS). The purpose of the study was to investigate the role of behavioral, psychological, and social factors in understanding

age-related differences in physical and mental health. The study was innovative for its broad scientific scope, its diverse samples (which included twins and the siblings of main sample respondents), and its creative use of in-depth assessments in key areas (e.g., daily stress, cognitive functioning).

With support from the National Institute on Aging, a longitudinal follow-up of the original MIDUS samples: core sample (*N* = 3,487), metropolitan over-samples (*N* = 757), twins (*N* = 998 pairs), and siblings (*N* = 950), MIDUS 2 was conducted between 2004 and 2006. The foci and content of the MIDUS and its affiliated studies are shaped by the guiding hypothesis that behavioral and psychosocial factors are consequential for physical and mental health. MIDUS 2 respondents were aged between 35 and 86 years old. Data collection largely repeated baseline assessments (e.g., phone interview, extensive self-administered questionnaire), with additional questions in selected areas (e.g., cognitive functioning, optimism and coping, stressful life events, caregiving).

To enhance the diversity of the MIDUS 2 sample, an additional African-American sample (*N* = 592) was recruited from Milwaukee, Wisconsin. Participants completed a personal interview and a self-administered questionnaire that paralleled the MIDUS 1 and 2 content. In an effort to capture those people who might have been missed in earlier waves of the study, MIDUS 2 also administered a modified form of the mail questionnaire, using the telephone, to respondents who did not complete a self-administered questionnaire. Overall, complete data were collected from nearly 5,900 people in the follow-up. To date, more than 200 studies based on the MIDUS data have been published in medical, psychological, sociological, gerontological, and epidemiological scholarly journals. See Brim, Ryff, and Singer (2004) for an overview of the study. An extensive and growing collection of MIDUS materials is available at the Inter-university Consortium for Political and Social Research at the University of Michigan (www.icpsr.umich.edu).

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*Barry T. Radler*

## VII. NATIONAL LONGITUDINAL SURVEYS (NLS) OF MATURE MEN AND WOMEN

The National Longitudinal Surveys (NLS) of Older Men and Mature Women represent two cohorts of the larger NLS project: a group of longitudinal studies sponsored by the U.S. Bureau of Labor Statistics.

Interviews of 5,020 American men ages 45 to 59 began in 1966, with data collection focused on work experiences, retirement planning, health conditions, insurance coverage, and leisure-time activities. Interviews with the men continued at regular intervals until 1981. A follow-up interview took place in 1990 with information collected from the men or their widows. The 1990 data include information of cause of death collected from vital records. During the regular 1966–1981 data collection period, a cohort of younger men (ages 14 to 24) was interviewed as well.

Interviews started in 1967 for the NLS mature women, a group of 5,083 American women ages 30 to 44. Much of the information gathered over the years included issues for women reentering the labor market at middle age after child rearing, along with retirement decisions and health issues. Extensive information about pension plans also was gathered, including characteristics of each pension provider and each plan. The mature women were interviewed a total of 20 times; data collection ended in 2003. During roughly the same period a group of younger women (ages 14 to 24 in 1968) also was interviewed. Many of the individuals in that group were the daughters of the mature women, and a series of questions about intergenerational transfers was asked of both groups so that for a subsample the NLS has reports about such transfers that were provided by both the mothers and their daughters.

Data collection continued for two younger mixed-gender NLS groups: one initiated in 1979 (known as the NLSY79) and one begun in 1997 (known as the NLSY97). In addition, age-eligible children of the female respondents in the NLSY79 group have been interviewed since 1986. The NLS database containing data from all cohorts can be accessed free of charge at the web site of the U.S. Bureau of Labor, Bureau of Labor Statistics. The *NLS Annotated Bibliography*, a comprehensive record of research based on NLS-related data, also is available online from the Bureau of Labor Statistics.

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## VIII. PANEL STUDY OF INCOME DYNAMICS (PSID)

The Panel Study of Income Dynamics (PSID) is a longitudinal study of a representative sample of U.S. individuals and the families in which they reside. The PSID emphasizes the dynamic aspects of family economics, demography, and health. Data have been collected since 1968 and continues to be collected as of 2008, making the PSID the longest running panel on family and individual dynamics. It has consistently achieved response rates of 95 to 98%, and as of 2005, 8,041 families were currently participating in the survey. Over the years the PSID has collected information on nearly 70,000 individuals spanning as much as four decades of their lives.

Through multiple waves collected over long time periods, these data are the only data ever collected on life course and multigenerational health, well-being, and economic conditions in a long-term panel representative of the full U.S. population. The PSID has collected data on employment, income, housing, food expenditures, transfer income, and marital and fertility behavior annually between 1968 and 1997, and biennially between 1999 and 2005. Additionally the PSID collects data on health status, health behaviors, health care utilization, health insurance, and philanthropy. Beginning in 1985 comprehensive retrospective fertility and marriage histories of individuals in the households have been assembled.

The PSID sample, originating in 1968, consists of two independent samples of the U.S. population: a cross-sectional national sample and a national sample of low-income families. The Survey Research Center (SRC) at the University of Michigan drew the cross-sectional sample, which was an equal probability sample of households from the 48 contiguous states designated to yield about 3,000 completed interviews. The second sample came from the Survey of Economic Opportunity (SEO) conducted by the Bureau of the Census for the Office of Economic Opportunity. In the mid-1960s the PSID selected about 2,000 low-income families with heads under the age of 60 from SEO respondents. The PSID core sample combines the SRC and SEO samples.

From 1968 to 1997 the PSID interviewed individuals from families in the core sample every year, whether or not they were living in the same dwelling or with the same people. Adults have been followed as they have grown older, and children have been interviewed as they advance through childhood and into adulthood, forming families of their own. In 1997 the PSID changed from every-year interviewing to every-other-year interviewing. Moreover, a sample of 441 immigrant families was added to enhance the representativeness of the sample.

In 1997 and again in 2002, the PSID supplemented its main data collection with information on PSID parents and their children in order to study the dynamic process of early life experiences. The supplement, called the Child Development Supplement (CDS), included a broad array of development measures such as (a) age graded assessments of cognitive, behavioral, and health status of children obtained from the caregivers and the child; (b) a comprehensive accounting of parental, or caregiver, time inputs to children as well as other aspects of the ways in which children and adolescents spend their time; (c) teacher-reported time use in elementary school; and (d) other-than-time use measures of additional resources such as the learning environment in the home, teacher reports of school resources, and decennial-census-based measurement of neighborhood resources. In 1997 CDS-I collected data on 3,563 children aged 0 to 12 in 2,394 families. Five years later, CDS-II reinterviewed 2,021 of the CDS-I families, providing data on 2,907 CDS children and youth.

Since its inception, more than 2,000 journal articles, books, book chapters, and dissertations have been based on the PSID, and in 2008 a paper is published in a peer-reviewed outlet roughly every 4 days. The study was named one of the National Science Foundation's (NSF) *nifty fifty*, which refers to the most notable NSF-funded inventions and discoveries in NSF history between the years 1950 and 2000.

It is difficult to briefly summarize the scientific impact of the PSID. Areas of significant contribution include intergenerational transmission of economic status, children's time use, the dynamics of poverty and economic status, resource sharing among extended family members, the interconnection between well-being and marriage and fertility, and neighborhood effects on individual social and economic outcomes.

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## IX. U.S. (DECENNIAL) CENSUS

Every 10 years since 1790, the Census of the United States has tried to count everyone in the country and note several of his or her characteristics. The enumeration is done by contacting someone in every household—by mail since 1960, in person previously—and asking respondents to describe themselves and also the people living with them. Characteristics of the population accumulated in this way are selected to be most widely useful in the society. They include questions such as age, sex, relationship in family, and marital status; questions about education and work; and questions about race, ethnicity, and geographic origin of the person and his or her ancestors. Some questions appear only in some decades as policy interests wax and wane. Some of the questions are asked only in a sample of these households, often 15 or 20%, so the samples are quite large. Although not perfect, census data have an extremely high response rate by survey standards. More is known about the magnitude and pattern of errors in the Census than in any other social science data set.

Census data are especially useful for describing the social and demographic context, often as part of a research presentation, as the introduction to a paper, or to describe a problem generally. They are useful as a benchmark against which to check the representativeness of data collected from another source, for example an independent and more detailed sample survey. Because data for everyone in the households are collected, census data can yield a lot of information about the living arrangements and the family context of the population. Because of the large sampling fraction and very detailed geographic coding, the Census can provide information about relatively small geographic areas—down to city blocks for some characteristics. The large sampling fractions also mean that the Census is particularly good for obtaining data about numerically small subgroups of people living in the United States. Census data can be used to investigate historical trends over a longer time span than any other kind of data.

Census data are unlikely to provide the researcher with exactly the variable needed to test a detailed hypothesis. Inventive scholars, however, have managed to investigate a remarkable number of issues using data from the Census. For example, a good deal of what is known about ethnicity in the United States is derived from census questions on the immigration status of people and their parents. In the early days of the cohabitation trend, census data on persons of the opposite sex sharing living quarters gave an early indication of the prevalence and trend of this cultural change.

The age variable in census data, however, can present difficulties. For many older people, age is reported by someone else in the household, and that person may not answer accurately. In some decades the Census Bureau has chosen to top-code age (that is, classify the oldest persons into an aggregated subgroup, such as "85 or older") because of concerns about its reliability at the oldest ages.

One can access census data in many ways, from generating a statistic interactively on the Census website to acquiring sample data from many decades to use in a detailed statistical analysis. The official website (http://www.census.gov) provides access to many pages that provide considerable detail on specific topics.

The Public Use Sample Files are samples of census households designed to preserve the confidentiality of the respondents. The result is usually a 1% sample of the total population. The Public Use Sample Files can be acquired in original census form from the Inter-University Consortium for Political and Social Research (http://www.icpsr.umich.edu). Historic census data and data reflecting questions matched across decades (useful for trend analyses) can be obtained from http://www.ipums.org.

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# DATING AND ROMANTIC RELATIONSHIPS, ADULTHOOD

Broadly defined, dating refers to social activities between individuals romantically interested in each other. However, there is wide variation among scholars and in popular culture as to what dating entails. Finding a long-term partner, entertainment, and increasing social status are among the many reasons that adults give for dating and engaging in romantic relationships. It is not surprising, then, that dating has many outcomes; it can be a satisfying endeavor, increasing the quality of life for individuals, or it can lead to violent or coercive interactions. Although dating may seem trivial or unimportant, the scientific study of dating attitudes and behaviors is vital to promote healthy relationships and prevent or intervene in harmful ones.

## HISTORICAL CONTEXT

In the United States, modern dating did not emerge until the 1950s and 1960s. Before then, couples engaged in courtship practices. Courting was a public activity exclusively focused on finding a marriage partner. Although arranged marriages per se were not standard practice, familial input into courtship limited young people's partner choices. In the 19th century it was customary for parents (especially a woman's parents) to give their consent before their children began courting.

Because of heavy parental involvement and the public nature of courting, couples would attend social events in the community, where family members could monitor the young people's activities. Should a more serious interest develop, young men could "call on" young women in their homes, but only if a woman or her mother issued an invitation. Thus, women and their families controlled and initiated courtship situations.

Perhaps in reaction to the rigid rules of courting, later in the 19th century, couples themselves began to have more control over their correspondence and social activities. Enjoyment, rather than marriage, became a central motivation for romantic relationships. Peers, instead of parents, defined conventions concerning these relationships; couples had more freedom and privacy. Control and initiative in the romantic relationship also changed. Rather than waiting for an invitation to call, men asked women out socially, and planned and paid for activities. Women served as the gatekeepers to affection and sexual activity; however, without parental monitoring, barriers to sexual behaviors were weaker.

Several cultural transformations in the early 20th century shaped modern dating patterns. Affluence and mass consumption turned attention from working to consuming (Whyte, 1992). Increasing numbers of telephones in homes allowed people to formulate plans, connect, and have private conversations more easily. The advent of the automobile gave people the means to leave home and seek recreational activities, as well as providing a private space for romantic and sexual activities.

By the 1920s and 1930s, going out romantically more closely resembled modern dating. Going on dates was no longer directly tied to marriage; rather, there were several steps in between to denote levels of commitment, such as going steady (i.e., dating exclusively), receiving a high school ring or pin, and becoming engaged. Individuals dated for a variety of reasons; enjoyment and romance was a main motivation, but people also dated to gain experience, to experiment, and to enhance their social status.

## DATING SCRIPTS IN THE LATE 20TH AND EARLY 21ST CENTURIES

Late in the 20th century, scholars began to theorize about the behaviors and meanings in romantic relationships. Within a society, people develop cognitive schemas, or mental representations, of various scenarios. In the 1980s and 1990s researchers began to study *dating scripts*, defined as the expected behaviors and events for a typical date (Alksnis, Desmarais, & Wood, 1996). Dating scripts are shaped through peer and parental interactions, media outlets, and popular culture. Although individuals have varied dating experiences, people have surprisingly similar ideas of what dating should encompass.

People in the early 21st century are more likely to report egalitarian values than in the past, with a balance of power between members of a couple, but research suggests that women and men have distinct dating scripts that mirror traditional gender roles. One way researchers measure dating scripts is by asking people about hypothetical first dates. Christine Alksnis, Serge Desmarais, and Eileen Wood (1996) asked a primarily White sample of college students to report events that occurred on good, bad, and typical dates. Overall, males and females agreed about what makes a good or a typical first date; however, some gender differences existed regarding appropriate sexual behavior. These findings suggest that

gendered dating scripts are particularly salient for sexual events; men may have a greater expectation of sexual activity, whereas women may deter those behaviors.

Other researchers have found support for expectations in which men are the initiators of dating activities, and women are responsible for the emotional aspects of the date (Bartoli & Clark, 2006). These scripts also exist within homosexual dating couples. In response to hypothetical and actual dating scenarios, gay men, like heterosexual men, tended to emphasize sexual aspects of dating and taking initiative for sexual behaviors and date activities. Like heterosexual women, lesbian women tended to focus more on the emotional aspects of the dating experience, such as evaluating feelings about the date. Whereas dating behaviors and partner selection may look different for heterosexual and homosexual dating couples, dating scripts appear similar within gender regardless of sexual orientation.

## DATING SCRIPTS FOR DIFFERENT CULTURAL GROUPS

Great variability exists within different cultural and ethnic minority groups regarding attitudes about dating. However, some scholars theorize that there is conflict between dominant culture (White) dating scripts and minority cultural values. Some research has suggested that Latino Americans and Asian Americans adhere more closely to traditional gendered dating scripts (Anderson & Johnson, 2003), compared to Whites. Among African-American dating couples, there is evidence of both traditional gender roles, such as women seeking successful male partners, and more egalitarian relationships, in which women may be the successful partner, for example (Ganong, Coleman, Thompson, & Goodwin-Watkins, 1996). However, the African-American community faces unique dating challenges. High rates of incarceration and mortality for Black men limit the number of potential dating partners available for Black women. Additionally, Black women are more likely to attain a college education and achieve economic success than Black men (Kurdek, 2008). Because of this discrepancy, some Black women may find it difficult to find a compatible partner within the African-American community. Increasingly, both men and women may choose to date interracially (Wilson, McIntosh, & Insana, 2007).

## THEORETICAL APPROACHES TO DATING RELATIONSHIPS

**Equity Theory and Investment Models** Equity theory is one lens through which dating outcomes can be viewed. This approach focuses on the balance between relationship contributions and outcomes, in addition to an individual's characteristics. Relationships in which both individuals experience equal benefits and rewards, such as trust, intimacy, and companionship, have the highest relationship quality and satisfaction (Hatfield et al., 1979). Individuals who contribute more than their partner and receive fewer rewards are likely to experience the most relationship dissatisfaction. People who receive more benefits than they should, based on their contributions, are not as dissatisfied as their partners, but they are not as happy as couples with equal contributions. In general, individuals in unequal relationships report that their relationships are less satisfying, less stable, and individuals are less committed (Sprecher, 2001).

Investment models illuminate the power dynamic in relationships. Power and control in a relationship are determined by the individuals' comparative reliance on each other. Author Willard Waller (1938) first explained "the principle of least interest," in which the person who is the least invested in the relationship will have the most power or control. The more invested person, in trying to maintain the relationship, will concede to their partner's demands. Investment by either partner may be affected by a number of factors. The level to which individuals find their partner rewarding and attractive is primary, as well as the assessment of alternative partners. Individual characteristics, such as physical attractiveness, intelligence, personality, wealth, or popularity, can affect both one's desirability and investment, and thus the power dynamics of a relationship.

**Biosocial Models** Biosocial perspectives, which draw from many disciplines, including evolutionary psychology, biology, and anthropology, help to explain the motivations underlying dating behavior. Evidence suggests that biological mechanisms may facilitate relationship continuation; levels of testosterone, estrogen, dopamine, nonrepinephrine, serotonin, oxytocin, and vasopressin have been linked to various relationship stages (Bancroft, 2005). For example, in the beginning stages of a relationship, both men and women experience higher levels of oxytocin, known as the *love hormone*, because it produces euphoric effects (Buss, 2004).

**Attachment Models** Attachment theory has evolved out of John Bowlby's (1982) idea of an attachment system, where attachment to another person, an attachment figure, provides one with a sense of physical closeness and comfort, a safe place or safe haven when one is upset, a secure base from which to draw strength and security, and feelings of sadness, loneliness, and longing when the attachment figure is not present. Bowlby theorized that this system is necessary for survival in infancy, but it also appears to be necessary during adulthood; and, most often, attachment bonds between adults take the form of romantic relationships. Attachment bonds do not

form instantaneously, however. They take time. Dating provides the time and interpersonal experience to form attachment bonds. Across age cohorts (from ages 18 to 82), Cindy Hazan and Debra Zeifman (1999) found that it took an average of 2 years for romantic relationships to become bonded, or attachment, relationships.

**Ecological Models** The nature of dating and relationships is shaped by its context. Societal norms, cultural values, political and historical contexts, technology, and media are only a few of the overarching frameworks that impact the way in which individuals date, as well as the meaning and expectations of the relationship (Bronfenbrenner, 1979). For example, increased casual sex portrayal in popular television shows and movies coincides with the acceptance and higher levels of casual sex among generations X and Y.

## FUTURE DIRECTIONS

Advances in modern technology have created new opportunities and challenges for dating. Increasingly, young and older adults alike are using the Internet as a way to meet people, as evidenced by the popularity of social networking sites and online dating services. Researchers have started investigating online relationships (sometimes referred to as computer mediated relationships). Some have argued that online relationships are problematic because interpersonal connection is lost, whereas others suggest that the Internet may be helpful to shy or anxious people that find it hard to meet potential partners. Erich Merkle and Rhonda Richardson (2000) synthesized studies of computer mediated relationships and found that compared to traditional dating relationships, people disclosed and came to know their partner intimately more quickly over the Internet. They also suggested that it may be harder to be committed to an online dating partner or maintain a relationship without face-to-face interaction. How the Internet is used in face-to-face relationships has yet to be examined. Additionally, future research should examine how online communication shapes notions of intimacy, commitment, and fidelity.

Globalization is another force changing dating. In a globalized community, the behaviors, meanings, and scripts associated with dating are likely to be transformed. Cell phones and the Internet allow individuals to connect to virtually anyone at anytime, and advances in transportation give people the opportunity to travel great distances with comparative ease. Long-distance dating is becoming more common, particularly for dual professional couples. However, researchers have yet to examine this trend.

The aging of the U.S. population also means that dating may be transformed in future years. The dating needs of older adults are different from those of younger or middle-aged adults. Kris Bulcroft and Margaret O'Connor (1986) interviewed a group of adults aged 60 or older for their study. Older adults' narratives highlighted companionship aspects of dating; loneliness was a common concern. Additionally, older men accentuate their need to have a confidante. Interestingly, older women associated prestige with dating. This may be due to the unequal male to female ratio among older adults, as women tend to live longer than men. Older adults, compared to their younger cohorts, face obstacles such as diminished social support and more health difficulties. Because of such obstacles, companionship can be that much more vital to an older person's quality of life. Future research could and should give more attention to the impact of elderly dating relationships.

The changing cultural landscape has an influence on dating relationships. Future researchers investigating these trends may also develop innovative methodology, especially with the constant technological advances being made. As children grow up with modern technology in a globalized community, the behaviors, meanings, and scripts associated with dating are likely to be transformed.

**SEE ALSO** Volume 2: *Marriage; Mate Selection*

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## DEBT

*Debt* is money owed to a lender, and *credit* is an authorization to incur debt given by a lender (the creditor) to an individual, couple, or business. The amount of a debt is a function of the original amount borrowed (the principal), the interest charged, and any fees assessed by the creditor. Creditors typically set interest rates based on their estimated likelihood of being repaid. In modern economies, credit bureaus generate scores for individuals based on their personal characteristics, including past debt history, to estimate the probability the borrower will repay a loan.

Every society experiences tension between classes of debtors and classes of creditors. Legal institutions usually reinforce creditors' rights, and debtors in many societies are cruelly treated: Slavery, prison, transportation to colonies, debt peonage, and even execution have been employed to punish debtors in different times and places. In the United States, historic institutions such as share-cropping and company stores used debt to limit employee turnover and to control workers. In share-cropping the landowner lent money to the workers who farmed his land. In the case of the company store, employers allowed workers to buy goods on credit, but only at stores owned by the company. In both cases, workers routinely became heavily indebted to the land and store owners and were therefore often unable to leave for other employment.

In the contemporary United States, the extension of credit is a highly profitable business and central to the economy. The marketing of many goods and services is

### BANKRUPTCY

Bankruptcy is a legal proceeding for restructuring or eliminating debt and adjudicating multiple creditors' interests. U.S. law recognizes six types of bankruptcy, identified by chapter number corresponding to the chapter in the U.S. bankruptcy code in which each type of bankruptcy is described in detail. Approximately 99% of the bankruptcies filed annually are consumer or personal bankruptcies filed either in Chapter 7 or in Chapter 13. Chapter 9 is for municipalities, Chapter 11 is for large corporations, Chapter 12 is reserved for family farmers, and Chapter 15 involves international cases.

Consumers who file Chapter 13 bankruptcy keep their assets but devote their disposable income to repay a portion of their debts over a period of not more than five years. Only about one-third of all Chapter 13 filers are able to successfully complete their repayment plan. Chapter 7, the most commonly filed, requires consumers to liquidate their nonexempt assets; proceeds are distributed to creditors. In Chapter 7 most unsecured debts, such as credit card and medical bills, are discharged; student loans, taxes, and child support must be repaid. Layoffs and unemployment, divorce, and medical problems are the most common triggers for consumer bankruptcy.

In 2005 Congress amended the Bankruptcy Code to require that debtors seeking Chapter 7 pass a means test and receive consumer credit counseling. Debtors who earn more than the median income of their state are directed to Chapter 13.

successful because customers can finance the purchases over time. Some level of debt is widespread in all social classes, so that social class tensions are muted. Between 1989 and 2007 the revolving consumer credit outstanding among residents of the United States soared from 18.9 billion dollars to 97.2 billion dollars. Certain points in the life cycle are associated with greater consumption, such as beginning a household or having children, and for this reason debt patterns can be expected to have a relationship to the life cycle (Kish, 2006).

Credit card debt is one of the largest components of personal debt in the United States in the early 21st century (the others include home mortgages, automobile loans, and loans for purchases of major consumer durables). Credit cards are convenient because nearly every vendor accepts them and consumers can make purchases without cash in person, by phone, or online. Credit purchases constitute borrowing when the consumer *revolves* the card's balance, making a partial payment each month and incurring interest and fees. The minimum payment required each month to keep the account current is not sufficient to liquidate the debt unless continued for months. The very convenience and ubiquity of the credit card may encourage customers to charge more than they can readily repay. Because credit cards are a profitable business for financial institutions, they are aggressively marketed. Credit cards first saturated the United States, but are now marketed worldwide, with substantial penetration of the markets in Europe and Canada. In Japan, by contrast, credit cards are used much less often (Mann, 2006).

Research about debt has been difficult because the most accurate information about debt and credit scores is proprietary and so unavailable for research purposes. The federal government makes available to researchers some debt information collected through surveys such as the Survey on Consumer Finance. Bankruptcy filings are public data with detailed debt listings. Other research findings come from interviews with consumers, credit counselors, bankruptcy trustees, and attorneys. A small body of experimental evidence examines credit card use in various situations.

## DEBT ACROSS THE LIFE COURSE

Although the exact method used to score credit is proprietary, age is believed to affect the score because of its association with other characteristics that are positively valued in the credit formula, such as years of schooling, employment seniority, and residential stability. In addition, a characteristic age profile of expenditures has been observed. For example, young people often borrow money for a college education or a first car. Because their credit scores may not yet be high, and borrowers with lower credit scores are typically charged higher interest rates, young people may end up paying more in credit costs than middle-aged customers (Draut, 2007).

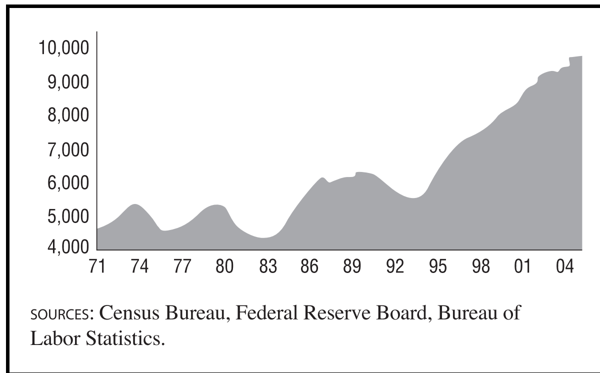
Although the legal age of contract is 18, credit cards are marketed to younger teenagers, usually with a parent as a cosigner. Credit cards are heavily marketed to college students, and several small studies of college graduates have indicated that college graduates' credit card debt may average several thousand dollars (Manning, 2000). One incentive for targeting young people is that consumers keep their original credit card for an average of fifteen years.

Many college students take out loans to pay for their tuition and other educational expenses. Some college loans are federally subsidized to keep the interest rates modest. Unsubsidized college loans are easy to obtain because lenders believe the future earnings of college graduates will be much higher than the earnings of high school graduates.

By the time of marriage, both spouses may have substantial debts, including credit card debt, college loans, and perhaps financing for cars or furniture. Early in a marriage, couples commonly pursue joint expenditures, often for a home or consumer durables. Unless the couple has substantial savings, financing major purchases through credit is commonplace.

Middle-aged consumers typically have higher incomes and potentially have better credit scores because of their greater job seniority, but they also have substantial expenditures for their children and perhaps for their elderly parents. Middle-aged consumers are likely to pay regular monthly debt service for home mortgages and perhaps for cars and consumer durables. Some also have remaining college debts to repay and may be cosigning college loans for their own children. Some borrowing is usually considered prudent, assuming that monthly income is stable or rising. But middle-aged consumers may experience sudden drops in income through unemployment, injury, or illness, leading to missed payments, which in turn lead to increased interest rates, especially on credit cards (Sullivan, Warren, and Westbrook, 2000).

People aged 65 and older are the fastest growing segment of the population in bankruptcy, countering a stereotype that the elderly are the most reluctant to incur debt (Sullivan, Thorne, and Warren, 2001). One factor is the cost of medical and long-term care among sick people. Even with Medicare, senior citizens may face unexpected expenditures for medicine, long-term care, medical equipment, and insurance company copays. Conversely, many senior citizens own their homes without a mortgage, have adequate retirement income, and enjoy relatively low rates of interest if they do seek to borrow money.




***Real Consumer Credit Growth.*** *Real consumer credit outstanding per American age 18 and older, 2004.* CENGAGE LEARNING, GALE.

Patterns of debt also vary by gender and by race/ethnicity. United States law provides for equal credit opportunities for women, especially married women, and for racial and ethnic minorities. In part because of their lower earnings and in part because unmarried women may have expenditures for children and other dependents, women appear to have higher debt levels relative to their earnings. Racial and ethnic minorities may also be subjected to higher interest rates because of their choice of lenders and because of practices such as redlining, a practice that charges borrowers high interest rates if they live in neighborhoods with characteristics considered to increase risk of default.

## PROBLEMATIC DEBT LEVELS

Both debtors and lenders assume that the debtors' income will continue uninterrupted. This assumption is potentially problematic. Unemployment or layoffs are a factor in 60% of consumer bankruptcies. Small business owners may receive too little profit as a result of a downturn in the business cycle or industry restructuring. A divorced person may lose income, take on additional expenses (e.g., child support, alimony), or both. People who become sick or injured may be unable to work, losing their income even if their medical expenditures are insured.

Moreover, debtors' other expenditures may exceed the anticipated level. Some expenses may simply be due to money mismanagement, but expenditures can rise for reasons beyond the borrower's control, resulting in further debt. Consumers may find themselves with involuntary debts, as when they are judged at fault in an accident. People without medical insurance may find that even the most minor illness or injury leads to serious debt. Failure to pay rent, utilities, or child support results in debt that accumulates interest. Finally debt itself is stressful and may lead to depression, marital strain, divorce, and other consequences that are in themselves costly (Sullivan, Warren, and Westbrook, 1995; Warren and Tyagi, 2004).

Debtors who are unable to repay have several options. Creditors may be willing to consider debt forbearance, such as a postponement of a payment schedule or even a reduction in the interest rate. Consumer credit counseling may be helpful in rebudgeting the debtor's income and teaching money management skills. At the extreme, the debtor may declare bankruptcy

Some debts are secured by collateral, so that failure to repay the debt results in the creditor taking ownership of the collateral. 68.2% of U.S. families have a home mortgage, which is a type of secured debt Reclaiming the home because of mortgage default is called foreclosure, and between January 2007 and January 2008 the number of foreclosures rose by 57%. Repossession is claiming a car or major appliance for failure to repay. In some states, creditors may also claim (*garnish*) a portion of the paycheck of a defaulting debtor.

## SUBPRIME LENDING

*Subprime lending* targets people whose credit history or income levels indicate that repayment is high risk (and therefore subprime), an assumption used to justify higher interest rates. *Usury* is defined as charging an illegally high rate of interest. Since U.S. usury laws were repealed in the 1970s, the amount of interest a lender may charge has been unregulated, so that market competition sets interest rates. Subprime borrowers, however, are considered such high-risk candidates that few will lend to them at regular interest rates. Beginning in the late 1980s, some lenders began aggressively marketing to the subprime market, which includes large numbers of people who are members of racial minority groups, have low incomes, or have histories of job instability. Subprime lenders may also use redlining, in the presence of characteristics such as high residential mobility, high unemployment rates, low levels of education, low incomes, and low levels of homeownership.

During the 1990s subprime mortgage lending, or making home loans to individuals and couples who did not qualify for conventional mortgages, grew increasingly common. Subprime mortgages often feature adjustable interest rates, with initially low (*teaser*) interest rates, even rates of 0%, which later increase to double-digit rates. Subprime mortgages may have prepayment penalties to discourage efforts to refinance the loans on terms more favorable to the borrower. Subprime lending has been implicated in the high rate of foreclosures in the early 21st century. It has also led to serious dislocations in the financial market, because bundles of subprime mortgages

were sold to third-party investors, and these investments have lost value as the subprime mortgages have failed.

### FRINGE BANKING

As many as 20% of residents in the United States have no regular banking arrangement and are instead served by lending institutions that charge high interest and market their services principally to the poor, to immigrants, and to racial minorities. These arrangements include pawn shops, title shops, rent-to-own, and payday loans. Pawn shops and title shops are somewhat similar to secured loans in that borrowers allow the lender to hold goods they own (anything of value for a pawn shop; a car title for the title shop) until the debt is repaid. Rent-to-own is superficially similar to ordinary consumer financing of household goods, except that the interest rates are much higher. Payday loans are a cash advance against a paycheck, and thus more similar to unsecured loans, again with a higher interest rate.

### REASONS FOR THE INCREASE IN DEBT IN THE UNITED STATES

An argument has been advanced that the current rise in debt results from a decline of the stigma attached to indebtedness, but the evidence for this hypothesis has not been compelling. An alternative hypothesis is that increased debt has risen as a result of consumer industries and the credit industry seeking to expand their markets. The profitable debt business has expanded to include even people who cannot readily repay, either through subprime lending or through the alternative fringe banking institutions. This alternative hypothesis sees the increase in debt as a corollary of advanced capitalism. The advanced capitalism hypothesis typically sees stagnant or declining real wages as an additional corollary to capitalism.

**SEE ALSO** Volume 2: *Consumption, Adulthood and Later Life; Home Ownership/Housing; Income Inequality; Saving;* Volume 3: *Wealth.*

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## DISABILITY, ADULTHOOD

Disability can occur at any age and anyone, at any time, can enter the ranks of "the disabled." Conditions such as blindness, deafness, mobility impairments, and mental retardation are commonly accepted (by the general public) as disabilities. However, in the United States, government definitions of disability include chronic illnesses such as diabetes and multiple sclerosis. Those with psychiatric disabilities, such as depression and mental illnesses, are also eligible for government disability services and benefits. Disabilities that are present at birth are termed congenital disabilities and the individual never develops an identity as a person without a disability. For individuals with congenital disabilities, disability is "normal." In contrast, disabilities either acquired or diagnosed in adulthood presents challenges because adults are faced with the developmental tasks of marriage, establishing a home, developing a career, and financial independence. With an adult-onset disability, often the spouse or partner (of the person with a disability) is involved in responding to the disability. Functional losses may be considerable when an individual acquires a disability in adulthood simply because these years are the period in which most individuals are at the peak of their professional lives.

The disability experience is unique to each person, even among individuals with the same type and severity of disability. The type of onset, the developmental stage

when the disability is acquired, the visibility of the disability, the environmental resources available, and personal characteristics and values specific to each individual make every disability experience different. Nonetheless, for purposes of organization and conceptualization, some sort of categorization is necessary. Categorization of disabilities is also necessary in order to provide government benefits and services to those who need them.

## CATEGORIZATION OF DISABILITIES

Two disability scholars (Smart, 2001, 2004, 2005 a, b; Vash, 1981) have categorized disabilities into three general types: physical disabilities, cognitive disabilities, and psychiatric disabilities. *Physical disabilities* include mobility impairments, such as quadriplegia (paralysis in both upper and lower extremities) and paraplegia (paralysis in trunk and lower extremities) (Crewe & Krause, 2002); neurologic impairments such as cerebral palsy and seizure disorders (epilepsy); sensory loss (blindness, deafness, and deafness/blindness); musculoskeletal conditions such as muscular dystrophy and chronic illnesses or conditions such as heart disease, autoimmune diseases such as lupus, and the various types of diabetes. Many injuries, after medical stabilization, result in long term disabilities. Often, the general public considers physical disabilities to be the only type of disability. *Cognitive disabilities* include mental retardation, Down syndrome, developmental disabilities such as autism, and learning disabilities, such as dyslexia. *Psychiatric disabilities* include affective disorders such as depression, and mental illnesses such as schizophrenia, alcoholism, and chemical and substance abuse.

An individual may experience a single disability or a combination of two or three disabilities. For the purposes of service provision, one of the disabilities is designated as the primary disability. The three classifications are organized by *symptoms* of disabilities, not by the *cause* (etiology). Often, the causes of disabilities are not known or understood, or there may be multiple causes. More important, the chief purpose of these categorizations is to devise treatment and service plans; therefore, the symptoms are of the greatest interest. Interestingly, there are known physical and organic causes for each type of disability and, therefore, if disabilities were categorized according to cause, all disabilities would be physical disabilities.

Categorization of disabilities also exerts a powerful influence on the degree of prejudice and discrimination directed toward people with disabilities and their families. Typically, those with physical disabilities experience the least degree of stigma and prejudice, probably because these types of disabilities are the easiest for the general public to understand. Persons with cognitive disabilities are subjected to more prejudice and stigma than those with physical disabilities, and individuals with psychiatric disabilities have historically been the targets of the greatest degree of prejudice and discrimination. The history of the provision of government services and financial benefits in the United States closely parallels this categorization of disabilities. Those civilians with physical disabilities received services in 1920 (Vocational Rehabilitation Act of 1920); those with cognitive disabilities received services in 1943 (Vocational Rehabilitation Act Amendments of 1943); and those with psychiatric disabilities in 1965 (Vocational Rehabilitation Act Amendments of 1965). The history of government service provision illustrates that laws and policy are legalized and systematic expressions of public opinion.

## RISING DISABILITY RATES ARE ADVANCES FOR SOCIETY

Disability is both common and natural and, furthermore, a larger proportion of the population has disabilities than ever before. Experts expect that this proportion will continue to increase. These rising rates of disability reflect an improvement in social conditions from both individual and societal perspectives because, in most cases, the alternative to the acquisition of the disability would be the individual's death. Innovations in neonatal medicine have allowed more babies to survive; but many are born with a disability. Likewise, advances in emergency medicine have saved the lives of many accident victims; but these survivors often have a disability, such as a spinal cord injury or a traumatic brain injury. Advances in medicine have led to longer life spans and rate of disability is positively correlated with age. For example, at present, there are more people who are blind in the United States than ever before due to the aging of the population. This is due to the higher rates of diabetes, sometimes a condition considered to be associated with old age. Medical progress also has increased the life spans of people with disabilities who, in the past, often did not survive to adulthood because of infections secondary to their disability.

The increase in the number of people with a disability may also reflect a statistical artifact. In recent decades, social and medical scientists have developed more accurate and complete counting of people with disabilities. Further, the definition of disability has been broadened. For example, over the last 25 to 30 years, alcoholism, learning disabilities, and mental illness were not considered to be disabilities. Before these conditions were considered to be disabilities, no services or treatment were provided and, further, these conditions were

***Disability Demonstration.*** *Members of the Americans Disabled for Attendant Programs Today, (ADAPT) take part in a protest outside the White House to protest cuts in funding for community based services.* AP IMAGES.

considered personal and moral failures, thus evoking a great deal of prejudice and discrimination.

### THE INDIVIDUAL'S RESPONSE TO DISABILITY

Most people with disabilities do not want to be viewed as tragic victims or heroes. Rather, they would like to be considered ordinary people. After their initial physical symptoms stabilize, people with disabilities do not view their disability as their primary identity; but they also understand that society often considers a disability to be the individual's most important characteristic. (This view is captured in widely used phrases such as "the person is not the disability" or disability is not the "master status.") People with disabilities and their families do not deny the presence of the disability, nor do they fail to manage and make accommodations for the disability; they simply consider the many other identities, roles, and functions of an individual with a disability. Often, both people with disabilities and their families are proud of their mastery of the disability and experience satisfaction in negotiating life's demands. Indeed, many people with disabilities consider societal lack of awareness and prejudice to be more limiting and demanding than the disability.

Someone's response to a disability is influenced by factors in the disability including the type and time of onset. Types of onset may be congenital (present at birth) or acquired. Other types of onset include sudden, traumatic onsets, such as a stroke or an accident. In contrast, other onsets are slow and insidious, such as many types of mental illness or autoimmune diseases. The individual's developmental stage at the time of onset may influence his or her responses. The individual with a congenital disability, such as cerebral palsy, has no identity or memory of being a person without a disability. With a congenital disability, it is the parents, siblings, and grandparents who must negotiate the stages of acceptance. Conversely, someone in middle age, who has an established identity of success and achievement, will experience the onset of a disability very differently, considering the losses to be substantial. Research has shown that older persons tend to accept disability better than do younger persons. Researchers have posited three reasons for this acceptance: The functional demands facing older adults, such as working or raising children, are decreased;

## AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act (ADA), which was signed into law in 1990, is the civil rights law for people with disabilities. Much of its wording was taken from the Civil Rights Act of 1964.

The ADA has five main sections or titles, each addressing a particular issue and each with different enforcing bodies. Title I is Employment; Title II is Transportation; Title III is Public Accommodations and Services (restaurants, theaters, art galleries, libraries, and so on); Title IV is Telecommunications; and Title V is Miscellaneous and includes guidelines for historical and wilderness sites.

The passage of the ADA in 1990 has facilitated the access of people with disabilities into many aspects of American life and has contributed to the collective identity of people with disabilities. The act also has spurred many advances in telecommunications, assistive technology, and job restructuring.

Despite these accomplishments, some political experts believe that the reforms have not produced much change in the overall social position of Americans with disabilities and that the gap between Americans without disabilities and Americans with disabilities has continued to grow.

many of the individual's age peers experience disability and, therefore disability seems *normal,* and people who are older typically have had a great deal of experience and expertise in responding to life's demands and the acquisition of a disability is simply thought to be another challenge. Interestingly, most, if not all, of the major developmental theories are silent on the issue of disability.

The course of a disability is the way in which the disability advances or progresses. There are three basic courses: stable, progressive, and episodic; each requires a different response from the individual. A stable course, such as would be expected with many types of blindness or spinal cord injury, presents fewer adjustment demands simply because the individual understands with what he or she is dealing. Progressive course disabilities (sometimes referred to as chronic degenerative disorders) require adjustment and response at each level of loss. Often, this includes a change in self-identity. Disabilities with an episodic course are probably the most difficult to deal with and the most stressful. Obviously, the individual feels a loss of control because he or she cannot predict when an episode will occur.

Some disabilities are visible and others are invisible. Diabetes and some types of mental illness are considered invisible while paralysis and blindness are visible disabilities. Often, it is not the disability itself which is visible, but rather assistive technology such as hearing aids or a wheelchair. For example, although diabetes is considered an invisible disability, those who wear insulin pumps on their belts are considered to have a visible disability. The individual with an invisible disability will be required to consider issues of disclosure. In addition, research has shown that there is a great deal more prejudice and stigma directed toward those with invisible disabilities than those with visible disabilities. Although no correlation exists between degree of visibility and degree of impairment, if the individual wishes to receive accommodations under the Americans with Disabilities Act (ADA), he or she must disclose the disability. Disclosure of disability in social situations, including the timing of the disclosure, is fraught with difficulty. If the individual discloses early in the relationship, the friend, associate, or romantic partner may terminate the relationship. Disclosure late in a relationship may be perceived as a lack of trust and a betrayal.

Not all disabilities involve disfigurement, but those that do, such as amputations, burns, and facial bodily disfigurements, elicit a great deal of stigma. These types of disfigurements do not hinder their activities; but service providers regard disfigurements as limiting simply because of the prejudice and discrimination in the general society. Therefore, we can see that it is society's prejudice, and nothing in the individual or the disability itself, which hinders the individual from full social integration. Obviously, disfigurements acquired in adolescence can undermine self-confidence in peer relationships and romantic and sexual partnerships.

People with disabilities must negotiate all of the developmental stages and, at the same time, respond to and manage both the disability and society's prejudice and discrimination. Adults with disabilities tend to marry at the same rate as those without disabilities; however, the average age at which a person with a disability enters a first marriage is higher.

### CURRENT TRENDS IN VIEWING DISABILITY

Until very recently, the *biomedical model of disability* dominated definitions of disability, provision of services and treatment, the public's conceptualization of disability, and the self-identity of people with disabilities. This model defines disability in the language of medicine, lending

scientific credibility to the idea that the cause and the management of the disability lie wholly within the individual, often called the *personal tragedy of disability.* Holding the individual responsible is also referred to as the *individualization* and *privatization* of disability. Underlying this model are the assumptions that deficit and loss are present and that disabilities are objective conditions that exist in and of themselves. This *objectification* process opens the door to the possibility of dehumanization because attention is focused on the supposed pathology.

The biomedical model is relatively silent on issues of social justice and one's interaction with the social and physical environment. This lack of awareness of society's collective responsibility to provide accommodations is termed the *medicalization* of disability. Certainly in the biomedical model, the emphasis is on the rehabilitation of the individual, rather than society's responsibility to provide accommodations to such people.

The biomedical model has a long history and, because of this, training in disability issues has been limited to medicine and other medically related fields. This is another example of the *medicalization* of disability. Furthermore, the history, values, and experiences of people with disabilities and their families have not been considered to be part of the general educational curriculum. Indeed, physicians have been the cultural translators of the disability experience. Rather than people with disabilities speaking and writing about the lived experience of disability, it is medical personnel who have described and explained disability to the general public.

The *sociopolitical model of disability* calls for a radical shift in perspective as to the location of the definition of disability from being almost exclusively that of the individual to a collective responsibility as is, for example, communicated in Canadian law. The Canadian Bill of Human Rights of 1960 defines the legal rights of all Canadians and states that it is the responsibility of all Canadians to provide equal opportunities to Canadians with disabilities. The sociopolitical model is an interactional model because it takes into consideration both the person with the disability and that person's unique situation. In this model, policy makers, professional service providers, and the general public become part of the issue of disability or stated differently, if disability is a collective concern, then the response is a collective responsibility. This model defines disability as a social and civil construction because there is nothing inherent in a disability that warrants prejudices or stereotypes and that reduces opportunity. The sociopolitical model has been called the *minority group model* and has fostered the involvement of many people with disabilities in advocacy movements such as the independent living movement and the disability rights movement. Given that the sociopolitical model considers disability a collective concern, advocates view disability studies and disability history as integral components of sociology, psychology, political science, and history curriculums.

**SEE ALSO** Volume 3: *Assistive Technologies; Sensory Impairments.*

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# DISCRIMINATION, WORKPLACE

**SEE** Volume 2: *Racism/Race Discrimination; Sexism/Sex Discrimination; Ageism/Age Discrimination.*

# DIVORCE AND SEPARATION

Individuals rarely enter into serious relationships, especially marriage, with thoughts about how the relationship might end. However, the prevalence of divorce and separation ensures that virtually everyone will have some experience with relationships ending in this manner either personally or by observing others. Most social scientists agree that divorce and separation represent points in a process of marital breakdown rather than isolated events. Therefore, for the purpose of this entry, *divorce* is defined as the legal termination of marriage and is discussed within the context of a series of events, of which separation may be a part. *Separation* refers to the point in a relationship when spouses choose to live apart due to problems in the marriage. The term *marital dissolution* is used to describe the overall process of marital breakdown. The legal status awarded to marital unions sets these relationships apart from dating, cohabiting, and same-sex couples, and, consequently, the processes and implications of relationship dissolution are also somewhat different. Although much of what is said here may apply to these other relationship forms, the primary focus of this entry is married, heterosexual couples.

## THE PREVALENCE OF DIVORCE: PATTERNS AND TRENDS

The fact that divorce and separation are frequent experiences in contemporary U.S. society is widely accepted. The most commonly cited statistic is that about 50% of marriages will end in divorce, with other estimates as low as 44% or as high as 64%. One could easily wonder which number is the most accurate and why there is such variability in reports. A few considerations are important in determining the most accurate statistic. First, does the number refer to all marriages or only to marriages that were begun in a certain year? Second, are first marriages the focus or does the number include remarriages? Third, is the intent to describe the entire adult population or a specific subpopulation (e.g., race or age group) only?

One way demographers calculate the divorce rate is by documenting the number of divorces per 1,000 married women age 15 and above for a given year, using data from the census or from marriage and divorce records (Cherlin, 1992). As of 2008, this figure hovers around 20%, or 200 divorces per 1,000 married women in a year. Another way to determine the divorce rate is to estimate the percentage of first marriages begun in a particular year that will end in divorce at some point during the couples' lifetimes—this is the source of the 50% figure so often cited. Individuals who are in their second or later marriages are more likely to divorce than are those in first marriages; about 60% of remarriages end in divorce. Rates also differ by race and ethnicity such that Hispanics have the lowest rates of divorce, followed by Whites, whereas Blacks have the highest rates.

The rising divorce rate occasionally provides fodder for political, media, and even social science debates about the changes occurring in family structures. Some reports discuss the ways in which divorce is causing the decline of the family and the detrimental effects this has on society (Popenoe, 1993). Examination of the longer-term trends in marital dissolution makes apparent that the level of divorce and separation seen in the early 21st century is not new or unusual. The reference period for those who make arguments about the decline of the family is often the late 1950s and 1960s, a time in which divorce rates dropped sharply following a spike after World War II (1939–1945). In fact, observing the trend in divorce from the late 1800s forward shows the 1960s to be a blip in what has otherwise been a fairly steady increase in divorce over time. Additionally, as Andrew Cherlin (1992) notes, the overall rate of marital dissolution has remained generally stable since 1860, but the way in which marriages end has changed. That is, life expectancy has increased over time, reducing the proportion of marriages in a given year that ended due to the death of a spouse so that, since 1970, marriages are more likely to end in divorce than in death. Moreover, separation is not a new phenomenon, although it is perhaps better documented in the recent past than was the case previously. For example, in the past, it was not uncommon for men who had difficulty providing for their families to simply desert them, yet these marriages were never officially recorded as having been ended.

Marital dissolution is one of life's transitions that is important to social scientists both in and of itself and because of its consequences for other family behaviors, including cohabitation, childbearing, and childrearing. Similarly, separation and divorce generally occur at a point in the life course during which the consequences are significant not only for the members of the couple themselves but also for those around them—namely their children, parents, and friends. For example, children must adjust to different living arrangements, either with a single parent (or alternating between both parents), a parent in a cohabiting union or remarriage, or perhaps in a multigenerational home in which grandparents help with childcare. Rising rates of divorce also influence the nature of family formation because individuals change the ways they think about getting married and beginning childbearing (Smock, 2004). That is, the fact that cohabitation and divorce represent options to getting into and remaining in a marriage that may not be ideal appears to be leading individuals to wait longer to marry, waiting until they are sure that the high expectations they have for marriage can be met with a particular partner.

## THE CAUSES OF SEPARATION AND DIVORCE

A vast literature describes various causes and factors related to divorce. This work typically stems from several broad theories that help explain changes in patterns of family formation and dissolution over time. The major theories relate changes in the family to (a) secular and demographic trends, (b) stages in the life course, and (c) (inter)personal factors.

Secular and demographic trend theories focus on "big picture" factors that relate to changes in the ways in which families function. For example, a societal shift from an agricultural to industrial economy, and the resulting urbanization, is cited as one of the leading contributors to increasing marital dissolution in European and North American nations (Goode, 1993). Decreased reliance on the family is fostered when schools, jobs, and other nonfamily institutions usurp functions formerly relegated to the family, creating a sense of independence, rather than interdependence, on the part of family members (Nimkoff, 1965). According to the theory, this decreased dependency on other family members reduces familial bonds, and divorce or separation become more likely. Similarly, rising labor force participation and increasing levels of education, particularly among women, are believed to increase marital instability and dissolution by giving women higher status or "bargaining power" in relationships (White & Rogers, 2000).

It should be noted, however, that the relationship between education and divorce is not always straightforward. Women with college educations have experienced a declining divorce rate, whereas the rate continues to rise for those without a college education (Cherlin, 2005). Additionally, individuals are better able to visualize alternatives to their current marriage when more time is spent outside of the family. Alternatives might include a potential partner who appears more desirable than one's current spouse, a new option for childcare, or an alternative income source to offset the possible loss of a spouse's income contributions. Other societal factors such as the percentage of the population that is urban versus rural, changes from fault-based to no-fault divorce laws, and cultural shifts in attitudes toward reduced stigma and increased acceptance of divorce have also been used to contextualize changes in rates of divorce.

Life course theories emphasize characteristics of the marriage that have been consistently related to marital dissolution. First, lower average ages at first marriage, and individuals who marry younger than their peers, predict greater marital dissolution. Age at marriage has even been suggested to be the strongest predictor of divorce in the early years of marriage, possibly because individuals who marry young are less educated and less financially stable or are more likely to be marrying to legitimatize a premarital pregnancy than their older counterparts. Second, duration of marriage is important,

as about half of all divorces occur within the first 7 years of marriage (Cherlin, 1992). Third, as noted above, individuals in remarriages show higher rates of divorce than those in first marriages. Fourth, the presence of children reduces the likelihood of divorce, at least initially, and childlessness is related to higher rates of divorce. It appears that the presence of children in a family slows the process of marital dissolution so that couples who are prone to divorce will take longer to complete the divorce process (Gottman & Levenson, 2000).

Finally, life course theory suggests that divorce rates have increased as mortality rates declined because individuals grow apart in their interests and goals as they age. Individuals' interests and abilities continue to expand and move in new directions as they mature, and many couples find that, whereas the spouses may have shared much in common in the early years of their marriages, they begin moving in different directions later. In some cases, spouses amicably choose to move in their own directions, whereas in other cases, partners almost seem to weigh the option of ending the relationship against the amount of time they may have to spend living with a partner who is no longer meeting their intellectual and emotional needs. In the past, one partner may have been deceased before the couple really began to feel pulled in separate directions.

Explanations of separation and divorce also consider personal and couple characteristics. For example, evidence consistently shows that religious affiliation and participation is a buffer against divorce. Two common explanations are that (a) some denominations, particularly Catholics and evangelical Christians, are opposed to divorce and their adherents' attitudes and behaviors follow the religious proscriptions and (b) being a member of a religious community offers social integration and social support that promote marriage and family. Couples in which spouses are similar in terms of education level, age, race, and religion, for example, are less divorce-prone than those in which there are large differences between spouses on these characteristics. Likewise, communication style and marital satisfaction have been shown to predict divorce. (However, there are a relatively small percentage of marriages that continue for long durations even though the spouses report low levels of marital satisfaction and low-conflict marriages that dissolve.)

Factors that serve to reduce the risk of divorce are a feeling of commitment to the relationship as expressed by an identity as a member of the couple; a sense that one should stay in the relationship for the sake of the children, because friends or family might disapprove of separation, or for some other reason; or a perceived lack of alternatives (Johnson, 1991). Couples who have many shared assets may find it more difficult to separate; and overall, good economic circumstances reduce the risk of divorce. Finally, attributes or the behavior of one's spouse (such as alcoholism, domestic violence, infidelity, psychological problems, division of household labor, and so forth) are often cited by the other partner as having led to separation or divorce.

Scientists use census data as well as data from national and smaller-scale surveys to test and refine these theories. Many of the studies are cross-sectional, meaning that data are collected at one point in time, so that trends are deduced by comparing younger and older respondents and those who have experienced a particular event, such as divorce, to those who have not. Cause-and-effect relationships must be inferred. Longitudinal studies, however, collect data from individuals or couples at multiple points in time and allow a clearer picture of the mechanisms relating causes and outcomes. The most sophisticated studies of divorce and separation are prospective studies in which married individuals are sampled and followed over time so that comparisons can be made between those who separate or divorce and those who remain married.

## CONSEQUENCES OF DIVORCE AND SEPARATION

Just as theories describing the causes of separation and divorce are varied, so too are assessments of the consequences of these events. Because of differences in perspectives, data collection method, and study samples used, scholars are not in complete agreement about the consequences of divorce, but some strong patterns have emerged.

Undeniably, individuals experience significant changes in their economic status following a divorce. Divorced women's precarious economic well-being is a key factor underlying concerns about high levels of divorce in the contemporary United States. Numerous studies have documented the severe economic consequences of divorce for women (Smock, 1994). For example, in 1996 the median family income of divorced mothers was about $20,000, compared to more than $50,000 for married mothers. By contrast, most studies find that men do not experience the same drops in economic status and in some cases even gained economically following separation or divorce. Patricia McManus and Thomas DiPrete (2001) suggest that this trend may be changing, however, as they found that most of the men in their nationally representative sample did lose economic status because of the loss of their partner's income and an increase in support payments. Other stressors following divorce or separation, such as the need to downsize residences or relocate to be near family and a drop in standard of living to which one has become

accustomed, can be directly or indirectly related to this drop in income. The combined effects of various stressors can have large negative effects on the adjustment of both adults and children experiencing divorce.

In addition to changes in economic status, divorce precipitates strains in many types of relationships. When animosity exists between the separating spouses, this may extend to other family members and friends. Depending on the level of conflict between spouses, for example, in-laws may have difficulty maintaining quality relationships that have developed over the course of the marriage. This is especially important for grandparents who may lose contact with their grandchildren if their child is not the custodial parent; conversely, the custodial parent loses this set of grandparents as a source of help with childcare and support. Separating spouses must also adjust to the potential loss of friendships as they find themselves left out of couple activities or because their friends feel it is appropriate only to correspond with the member of the couple to whom they are closer. As there is often animosity between separating spouses, staying friendly with both members of the couple could be perceived as an act of betrayal. Relationships are strained when custody battles are intense or when the noncustodial parent becomes withdrawn from the child's life. Evidence suggests that both the parent and the child suffer when the parent withdraws. Changes in interpersonal relationships such as these increase the negative effects of divorce significantly by adding stress while removing potential sources of social support.

Certainly, the picture of postdivorce adjustment for children is not nearly as grim as it once was—neutral and even beneficial effects of separation have been cited. In general, it appears that many factors beyond the divorce event itself influence the way its effects will be played out for children. For example, if the parents' marriage is one in which little conflict is evident, the effects of the divorce on children appear to be negative, whereas if much conflict has been displayed, the effects are generally positive (Booth & Amato, 2001). A child's age and developmental stage at the time of divorce, gender, and quality of the predivorce parent–child relationships also have an impact on the way the consequences are felt. Scientists find negative consequences to be quite varied, ranging from behavioral problems in children (although some are likely to have been present prior to the divorce), to issues in psychological development and adjustment, to changes in levels of social support received from family and peers, and, later, to difficulties in the offsprings' own marriage(s).

Emerging research is beginning to examine when and how divorce or separation is beneficial to individuals, such as by giving members of unhappy couples a second chance at happiness or removing individuals from environments fraught with conflict, dysfunction, or abuse. Life cycle approaches and theories of adjustment to stress are also being employed to determine the ways in which people adjust to the negative effects of separation or divorce and whether those effects are short lived or long term, or both.

## THE STUDY OF DIVORCE AND SEPARATION: BEYOND CAUSES AND CONSEQUENCES

Research on divorce and separation has expanded greatly in the past few decades to include topics not previously examined in any depth. For example, social scientists are beginning to focus on smaller subgroups of the population, such as members of different racial or socioeconomic groups or individuals who divorce at later points in their marriage(s), with an additional focus on how the dissolution of nonmarital unions is similar or different from that of marital unions. Others are making strides in documenting relationships between biological factors and relationship behaviors, including divorce. These studies include the observation of levels of hormones such as testosterone and cortisol among those who divorce (and at various points in the dissolution process) and those who do not, as well as examining whether genetics might play a role in relationship stability. Remarriages and stepfamilies have been explored in the past, but much is left to learn about these complicated family forms.

Along with the expansion of topics of study, new data collection strategies and methods are emerging. Survey data remains the primary source of data in this area, but researchers are employing other methods as well. Focus groups and in-depth interviews provide rich detail about individual couples' experiences, and videotaped interactions allow researchers to examine the ways in which communication patterns and interaction styles predict marital success years later. Biological markers (e.g., measures of hormones, DNA) are being included with survey data for later exploration, and social network analyses and sophisticated statistical techniques allow investigators to fully appreciate the complexity of personal and family relationships.

The field is moving in many new directions, and each step forward uncovers a host of opportunities for further study. Much of the focus to date has been on the effects of divorce and separation on the immediate family, the couple, and their children. Research is just beginning to address how other relationships (e.g., grandparents or grandchildren) are affected in the long term. Another gap that remains in the study of divorce and separation is an evaluation of the various intervention strategies (such as therapy, mandatory mediation, and education-based

programs) available for couples and their children at various stages in the divorce process.

### POLICY IMPLICATIONS

The continuing concern over contemporary rates of separation and divorce is evident in family policy enacted in the late 20th and early 21st centuries. Marriage-promotion programs have been put into place by state and local governments in order to help families avoid divorce. The ongoing focus on marital unions as the preferred family form means that individuals experiencing dissolutions of other types of relationships—cohabiting unions or same-sex relationships, for example—are not entitled to the same limited resources (e.g., mandated support payments) as divorcing couples, even though the effects of the dissolution may be quite similar. The large body of research summarized here suggests that public policy is not meeting all of the needs of families experiencing the declines in economic circumstances and social support that accompany separation or divorce.

**SEE ALSO** Volume 1: *Child Custody and Support;* Volume 2: *Cohabitation; Family and Household Structure, Adulthood; Marriage; Noncustodial Parents; Remarriage.*

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## DOMESTIC LABOR

**SEE** *Housework.*

## DOMESTIC VIOLENCE

Domestic violence research has expanded substantially since the 1970s, as scholars, activists, and policy makers have explored the many facets of this social problem. Research tends to focus primarily on the prevalence, causes, and consequences of intimate partner violence and on the effectiveness of prevention and intervention services for victims and perpetrators. On the one hand, the increase in this line of study has fundamentally changed social perceptions and knowledge about domestic violence and has led to increased resources for victims. On the other hand, the plethora of research makes it apparent that creating a universal definition of domestic violence, particularly of intimate partner violence, is challenging and becoming progressively more difficult. This complexity is essentially the result of typology scholarship that has empirically shown that intimate partner violence is not a unitary phenomenon and that more than one type exists. These new advances have challenged previous conceptualizations of the issue and compelled researchers, activists, and policy makers to reevaluate to whom research findings can be generalized and the appropriateness of ''one-size-fits-all'' models of understanding, preventing, and ending partner violence. By better understanding why individuals choose to use violence against family members, and by becoming more aware of its differing effects on victims' short- and long-term health and well-being, more can be done to effectively prevent violence, intervene on behalf victims and hold violent partners accountable for their behaviors.

## DEFINING DOMESTIC VIOLENCE

Domestic violence or intimate partner violence is typically thought of as a person's use of physical, emotional, or sexual abuse against an intimate partner. Though widely used, this simplistic definition masks the intricacies of this social problem and essentially fails to recognize the complexity of the issue. Mounting evidence suggests that intimate partner violence research explores a wide range of qualitatively distinct types of violence that, without making proper distinctions, can be misinterpreted and contradictory. Depending on the sampling strategy used (i.e., who is being studied and how they were recruited to participate), researchers may uncover very different types of intimate partner violence and subsequent findings about its prevalence, characteristics, and outcomes for victims.

Murray Straus, Richard Gelles, and Suzanne Steinmetz (1980; see also Straus, 1979, 1990, 1999) have contributed significantly to the field by employing large surveys that examine partner violence among the general population of heterosexual couples. This research has tended to focus primarily on the incidence and frequency of partner violence within the U.S. population. Their findings show that partner violence is relatively common in the United States, with about 12% of married couples reporting that at least one partner used an act of physical violence in the past year and about 30% reporting such violence over the course of the relationship. Their findings also suggest that women are as likely as men to use a violent act against an intimate partner, referred to as *gender symmetry*. Steinmetz's controversial 1977–1978 article, "The Battered Husband Syndrome," ignited an ongoing, rancorous debate concerning the issue of intimate partner violence gender symmetry. Steinmetz argued that "An examination of empirical data on wives' use of physical violence on their husbands suggests that husband-beating constitutes a sizable proportion of marital violence" (p. 501).

Straus and colleagues' findings largely contradict those of other researchers who have relied on samples of victims seeking services through the police, divorce courts, hospitals, and battered women's shelters. Data from these agency-based samples consistently show that in heterosexual relationships, it is unequivocally men using violence against women—violence that tends to be severe, frequent, escalating, and largely embedded in a pattern of power and control. Based on such research, the National Coalition Against Domestic Violence (2005) defines intimate partner violence or battering as

> a pattern of behavior used to establish power and control over another person with whom an intimate relationship is or has been shared through fear and intimidation, often including the threat or use of violence. . . . Intimate partner violence [is] intrinsically connected to the societal oppression of women.

Victim advocates and activists, therefore, conceptualize intimate partner violence as one of many types of violence against women (other types include rape, stalking, and sexual harassment) and consider it a social problem rooted in gender-based hierarchies and institutions that "support and reinforce women's subordination" (Goodman & Epstein, 2008, p. 2). This framework draws heavily from the Duluth Domestic Abuse Intervention Project, also known as the Duluth Model, which is considered the most well-known coordinated agency effort to confront the problem of men's violence toward their partners (Pence & Paymar, 1993).

Michael P. Johnson (1995, 2005, 2008) is one of several researchers (see also Holtzworth-Munroe, Meehan, Herron, & Stuart, 1999; Jacobson & Gottman, 1998) who have attempted to resolve the ongoing gender symmetry debate by arguing that more than one type of partner violence exists depending on the sampling strategy used. Johnson (2008) defined *intimate terrorism* as violence in which one partner (almost always the man in heterosexual relationships) uses physical violence to create and maintain general control over his partner. As such, physical and often sexual violence are part of a larger context of coercive control, which likely includes isolation, economic abuse, threats, using male privilege (e.g., treating the woman like a servant whereas the man acts like the master of the house), and using children. The motivation to use violence is essentially to demonstrate and reinforce control over a partner. This is the type of violence that comes to mind for most people when they think about or hear the term *domestic violence*, and victims of intimate terrorism generally show up in agency-based samples such as battered women's shelters and hospitals because of the severe physical and psychological harm that it causes. Sometimes women subjected to intimate terrorism will physically fight back in an attempt to defend themselves or their children. This type of violence is referred to as *violent resistance* (Johnson, 2008).

Intimate terrorism differs dramatically from situational couple violence, which is physical violence that erupts between partners and results more from a specific argument that has "gotten out of hand" with one partner striking out physically against the other (Johnson, 2008). This type of violence is not rooted in a general motivation to control one's partner; rather, it is a situationally specific response to some type of conflict. This is likely the type of violence exposed by Straus and colleagues, who rely on general population-based survey data, and it

is arguably the most common type of intimate partner violence (Johnson, 2008).

To date, most research does not clearly distinguish between types of violence, and the field has come to include data representing intimate terrorism, situational couple violence, and violent resistance with dramatically different findings concerning the nature and meaning of each form of violence. Unfortunately, all three of these types are often referred to generically as *domestic violence, domestic abuse, intimate partner violence*, or even *battering*, and often researchers will mix and match statistics from different types without specifically informing the reader which type of violence their study is about or to whom findings can be generalized. Different sampling frames yield different violence prevalence rates and differences concerning factors associated with violence. Moreover, each type of sampling method tends to be biased in its own way. For example, it is unlikely that situational couple victims would be in agency samples such as violence shelters or court samples because they are unlikely to experience a level of danger requiring such intervention. At the same time, intimate terrorism victims might not respond to general population surveys for fear that the abusive partner would find out and retaliate physically (Johnson, 1995).

## IMPLICATIONS FOR LIFE COURSE DEVELOPMENT

Depending on the type of violence used, violent partners can cause major psychological and physical harm to victims. The most common physical consequences of partner violence include injuries such as bruises, lacerations, broken bones, concussions, burns, miscarriages, and bullet wounds and also other noninjury-related health problems such gastrointestinal problems, chronic headaches and back pain, and general poor health. Intimate terrorism victims suffer significantly more severe physical consequences compared to situational couple violence victims, which is not surprising given the greater severity and frequency associated with intimate terrorism (Johnson & Leone, 2005).

Research shows that male partner violence is the primary cause of traumatic injury to women and is one of the leading causes of death for pregnant women (Griffin & Koss, 2002). Violence before pregnancy is a strong predictor of violence during pregnancy, whereas for other women violence increases or starts during pregnancy. Women's perceptions of violence during pregnancy indicate that power and control are central to this form of violence and cite their partner's jealousy of the unborn child, anger about the pregnancy, belief that the child is not his own, and/or anger about her lack of sexual interest as causes of the abuse. In some cases, a violent partner's anger and jealousy will drive him to attempt to cause a miscarriage by direction blows to the pregnant woman's abdomen (Campbell, Oliver, & Bullock, 1993). Approximately 1,300 women are killed each year by an intimate partner, comprising 34% of the murders of women (Rennison, 2003). Male partners are most likely to kill a female partner when she attempts to escape the relationship.

Jacqueline Golding's (1999) meta-analysis of the prevalence of health consequences of violence among female victims of partner violence supports this assertion. She found that about 60% of women studied through agency samples report symptoms of depression compared to 44% in general population samples; between 20% and 55% of women in agency samples report suicide attempts compared to 7% of women in general population samples; and about 33% of agency samples report alcohol abuse or dependence compared to 19% of general population samples. Finally, about 64% of agency samples of women meet the clinical criteria for posttraumatic stress disorder.

Some researchers have examined the association between growing up in a violent home and subsequently becoming involved in a violent marital relationship, the so-called *intergenerational cycle of abuse*. The vast majority of men who experience childhood family violence, however, do not grow up to be violent in their own families (Straus et al., 1980). A meta-analysis by Sandra Stith et al. (2000) found a weak to moderate relationship between the two, with the greatest effect among young males growing up in homes in which the father used highly controlling, often severe physical violence against the mother. These findings potentially support a learning model of male intimate terrorism perpetration and not necessarily one for victimization.

## INTERVENTIONS FOR VICTIMS/ PERPETRATORS

Intervention programs for violent partners (typically referred to as *batterer intervention programs*) have been shown to be minimally successful and tend to have low completion rates (i.e., few participants remain in the program for its full duration). For example, a review of effectiveness among both quasi-experimental and experimental studies estimated that 40% of treatment participants are successfully nonviolent compared to 35% of nontreatment participants (Babcock, Green, Webb, & Yerington, 2004). It is also important to note that program "success" is often equated to a cessation in the use of physical violence, which is problematic because many violent partners, particularly intimate terrorists, will likely continue to use coercive control tactics such as emotional abuse, stalking, and threats to use physical or

sexual violence even after a victim has escaped (Dobash & Dobash, 2000).

Contrary to common belief, partner violence victims seek help to end the violence against them, and within 2 years nearly half of victims experiencing controlling, severe physical violence escape and two-thirds no longer experience violence (Campbell, Rose, Kub, & Nedd, 1998). Intimate terrorism victims are more likely than situational couple violence victims to seek help from formal help sources (e.g., police, medical agencies, counselors) but are equally likely to seek help from informal help sources (e.g., family, friends; Leone, Johnson, & Cohan, 2007). Although research has not tested the effectiveness of different intervention programs among victims experiencing different types of violence, programs demonstrate relatively short- and long-term success for victims of controlling, physical violence—particularly when it is a part of a community-based advocacy program or a coordinated response. Chris Sullivan and Deborah Bybee (1999) used an experimental design to test the effectiveness of a 10-week post-shelter intervention with trained advocates and found that women who worked with advocates reported less violence and a higher quality of life and social support, and they were more likely to secure community resources over a 2-year period. These findings underscore how important social programs are in not only protecting victims from continued violence and abuse but also helping them secure the social and economic resources needed to recover from the trauma that they have endured.

**SEE ALSO** Volume 1: *Aggression, Childhood and Adolescence; Child Abuse; Crime, Criminal Activity in Childhood and Adolescence;* Volume 2: *Crime and Victimization, Adulthood; Mental Health, Adulthood; Stress, Adulthood; Trauma;* Volume 3: *Elder Abuse and Neglect.*

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*Janel M. Leone*

## DRINKING, ADULTHOOD

SEE Volume 2: *Health Behaviors, Adulthood.*

## DRUG USE, ADULTHOOD

SEE Volume 2: *Health Behaviors, Adulthood.*

## DUAL CAREER COUPLES

The term *dual career couples* captures the life-course concept of linked lives: Contemporary households increasingly must coordinate and strategize around two employment pathways (his and hers) along with their family pathway.

Some people define dual career couples as those in which both partners hold professional jobs. However, defining the term more broadly (as dual *earner* couples) is useful for understanding continuity and change in the family and occupational circumstances of all employed women and men who are married (or in marriage-like relationships), not just professionals. Dual earner households are now the norm. Only 6% of wives in the United States were employed outside the household in 1900, growing to only one in five by 1950. By contrast, in the early 21st century more than three in five wives are in the workforce. Investigations of dual earner couples are thus key to understanding the changing nature of families, work, and gender relationships.

Research shows that, given the mismatch between jobs designed for single (male breadwinner) earners without family responsibilities and the actual circumstances of their lives, dual earner couples engage in a range of adaptive strategies to coordinate their two occupational pathways and to manage the family side of their work-family equation. They also must adapt to inevitable crises (unemployment, an automobile accident, an unplanned birth, a geographical career move for one spouse) and contradictory gender norms and expectations. For example, many American women have been socialized to believe (a) they can (and should) pursue and move up career ladders and (b) they can (and should) simultaneously have a successful marriage and family life. Similarly, many new age American men have come to believe (a) they can (and should) continue to be the family breadwinners, following the traditional linear, male career path and (b) they can (and should) actively participate in childrearing and domestic work on the home front.

However, both men and women find these goals difficult to reconcile. Occupational career paths remain designed around the career mystique (a lockstep path of full-time, continuous employment as the only blueprint for good jobs, typical of middle-class men with homemaking wives in the 1950s). A global information economy means many jobs now demand far more than the traditional 40-hour workweek, making it difficult for wives and husbands to meet two sets of job demands and goals, along with their family demands and goals.

Life-course scholars examine the ways gender, relationships, and roles intersect and change, studying the interdependence between husbands' and wives' work and family obligations, couple divisions of both paid and unpaid labor, and immediate as well as long-term rewards and costs of various adaptive strategies. Research documents that, even though they may endorse and strive for gender equality in their relationship, couples tend to make strategic occupational and family decisions under the constraints of gender expectations that perpetuate gender stereotypes and inequalities (prioritizing the husbands' jobs, for example, or having the wife "opt out" of the workforce for a time). The fact that women are less likely to earn as much or to advance as far as their husbands colors couples' decisions about how to manage two jobs per household in a world that is organized to accommodate one job per household. The result of women scaling back as a strategy to achieve, retain, or aim for a better life course "fit" in the multiple dimensions of their lives perpetuates gender divisions in the amount of time each partner spends in paid work, homemaking, and the care of children and infirm parents or other relatives.

Demographic trends provide evidence that most couples also follow strategies that bend their personal lives to their occupational careers, rather than vice versa. Consider, for example, family strategies that have been adopted culture-wide: postponing marriage or childbearing, reducing family size, or remaining childless. All serve to reduce the family demand side of the dual career-family equation.

Research shows that couples pursue a variety of gender-based strategies around each spouse's paid work. First, a considerable minority of couples have both spouses highly invested in their jobs (the dual committed). Both spouses in this arrangement can be expected to put in long hours on the job, hold high-status (professional or managerial) jobs, and accord high priority to each of their jobs. Evidence shows that these couples are less likely to have children than those pursuing other work arrangements.

A second strategy is to put both partners' occupational careers on the back burner, giving primacy to the private aspects of their lives (those with alternative commitments). This can be either a deliberate choice or a situation in which members of the couple lack the education, skills, or opportunity to do otherwise. This category includes couples in nonprofessional occupations as well as those in a variety of jobs who deliberately choose to work (at most) a regular full-time workweek. Couples with alternative commitments may see both spouses' jobs as having equal (low) priority in their lives. However, studies show this option is likely to be rare, given the ways jobs, careers, pay scales, and consumption patterns are structured.

Often only one partner scales back on career investment and objectives. This compensatory strategy occurs when one spouse invests more in paid work while the other spouse invests more in the domestic aspects of their lives. A modified form of the traditional breadwinner-homemaker model (the neo-traditionalists) occurs when husbands are heavily invested in their jobs and their wives are not. This model perpetuates classic gender inequalities and differences. By contrast, when wives are the ones exclusively on a demanding occupational career track, couples are very much at odds with contemporary gender norms (those with crossover commitments).

The evidence suggests that many dual earner couples (e.g., 38% of the couples in the Ecology of Careers Study; Moen, 2003) follow the neo-traditional strategy. For example, husbands with highly time-consuming or psychologically draining jobs are apt to have wives who carry more of the emotional burden at home, which conforms to evidence on the gendered division of household labor and theories about the social construction of gender. Some research shows that when both spouses work regular full-time hours (39 to 45 hours per week), rather than long hours (more than 45 hours per week), both husbands and wives report higher life quality. This suggests the potential value of a more equal but, at the same time, reasonable division of paid work.

It is increasingly evident that work-life strategies are typically made by couples as couples, not as individual workers, and that they are fluid and dynamic processes. A focus on couple-level adaptations and how they shift over the life course provides a useful way of thinking about and studying gender, jobs, and families, along with the occupational paths of women and men. To do so requires recognition of (a) the value of using couples (rather than individuals) as the theoretical unit of inquiry; (b) possible life-stage variations in dual earner couples' adaptive strategies as couples set up a joint household; children are born, go to school, and grow up; aging parents (or spouses' or personal) health issues emerge; and couples plan for and negotiate two retirements; and (c) the continuing salience of existing gender norms and prepackaged career clocks, calendars, and expectations that privilege and reward the lock-step career mystique. These choices often serve to reconstruct and exacerbate gender inequality in a cumulative process of advantage and disadvantage over the life course.

Examining couples' occupational career development as a joint process illustrates a key policy challenge of modern times—the need for, and the opportunity to develop, new institutional arrangements that expand occupational career options, including opportunities for entries, exits, reentries, and scaling back that are not simply prescriptions for future disadvantage. Moving to greater, "no cost" career customization would enable dual-earner couples to better manage at home and work, improving the life quality of employees, couples, and families.

**SEE ALSO** Volume 2: *Careers; Employment, Adulthood; Gender in the Workplace; Housework; Marriage; Time Use, Adulthood; Work-Family Conflict;* Volume 3: *Moen, Phyllis.*

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***Phyllis Moen***

# DURKHEIM, ÉMILE
## *1858–1917*

Émile Durkheim is widely recognized as the father of sociology, and is credited with transforming sociology into a rigorous social science. His seminal writings on suicide, social integration, criminality, and religion have had a profound influence on life course sociology. Durkheim's works focused on the broad question of what makes a society stable and cohesive. He concluded that social integration, or the extent to which norms and shared beliefs hold members of a society together, has powerful influences on the health, stability, and efficiency of a society.

Durkheim was born in the Lorraine province in France on April 15. Following in the footsteps of his forefathers, he spent his childhood years preparing himself for the rabbinate. As an adolescent he discovered that teaching was his calling and moved to Paris to prepare for the École Normale, which he entered in 1879. Durkheim was inspired by his teacher, the classicist Numa-Denis Fustel de Coulanges (1830–1889). From Fustel he learned that the sacred could be studied rationally and objectively. He also read the pioneering work of early empiricists Auguste Comte (1798–1857) and Herbert Spencer (1820–1903), whose ideas shaped the philosophical and methodological foundations of Durkheim's work.

From 1882 to 1885 Durkheim taught philosophy in France. He took a leave of absence in 1885 and 1886, at which time he studied under the psychologist Wilhelm Wundt (1832–1920) in Germany. In 1887 he was named a lecturer at the University of Bordeaux, a position raised to a professorship in 1896, the first professorship of sociology in France.

The 1890s were a period of tremendous creativity and productivity for Durkheim. In 1893 he published *The Division of Labor in Society,* and in 1895 he published *Rules of the Sociological Method*, a manifesto stating what sociology was, and how sociological research and theorizing should be done. In 1898 he founded the scholarly journal *L'Année Sociologique*; his goal was to provide a venue for growing numbers of students and research collaborators to publish and publicize their cutting-edge work. He also had a broader mission: to bring the social sciences together and to demonstrate that sociology was a collective, not a personal, enterprise.

In 1902 Durkheim was named to a professorship at the Sorbonne. Because French universities historically served as training grounds for secondary school teachers, his position afforded him great influence; his lectures were the only ones that were required of all students. In 1912 he was assigned a permanent position of chair. Three years later, he published his last major work, *Elementary Forms of the Religious Life* (1915).

His personal and professional successes reached a tragic turning point during World War I (1914–1918). His son, as well as several of his former students, whom he had trained to become social scientists, were called to fight in the war and ultimately died. Rampant nationalism among the French right made Durkheim's leftism a target of criticism and attack. Emotionally devastated, he died from exhaustion on November 15, 1917, at age 59.

### DURKHEIM'S CONTRIBUTIONS TO LIFE COURSE RESEARCH

Durkheim's development of rigorous research methods and his attention to social integration are two of his key contributions to the study of life course. Durkheim proposed that a social system could only be understood through the analysis of social facts, and that contributing to the fund of reliable social facts was the key task of the sociologist. *Social facts* are social patterns that are external to individuals. For example, customs and social values exist outside of individuals, whereas psychological drives and motivation originates within people. Although social facts exist outside individuals, they nonetheless pose constraints on individual behavior. As Durkheim observed, "The individual is dominated by a moral reality greater than himself: namely, collective reality" (Durkheim 1997 [1897], p. 38).

The concept of social fact is exemplified in Durkheim's seminal work *Suicide* (1897); here he revealed that suicide is not necessarily a product of psychological demons, or a biological predisposition to sadness. Rather, Durkheim found that suicide rates were socially patterned: "A victim's act which at first seems to express only his personal temperament is really [caused by] a social condition." He conducted a rigorous analysis of official statistics, and compared and contrasted the suicide rates of diverse social groups across several nations. His analyses revealed that suicide rates were typically higher for men, Protestants, wealthy persons, and unmarried persons, whereas rates were lower for women, Catholics, Jews, and poorer persons. *Suicide* encapsulates a key concept upon which life course sociology is built: the sociological imagination, or the ability to seek the link

*Émile Durkheim.* ©BETTMANN/CORBIS.

between individualized thoughts and behaviors, and macrosocial patterns or influences.

Perhaps the most important conclusion of *Suicide*, however, was that social integration is critical for individual well-being over the life course. In interpreting his study findings, Durkheim highlighted that married persons and women tend to be embedded in more tightly-knit social networks than single persons and men. Similarly, both the social practices and belief structures of Catholicism and Judaism emphasize social integration, whereas the Protestant tradition upholds the traditions of individuality and personal choice.

Levels of social integration affect more than suicide rates, however; other important life course outcomes such as deviance are also shaped by the level of integration in a society. Durkheim argued that through the processes of modernization and urbanization, individuals would lose long-standing attachments and social ties that were a trademark of traditional rural villages. He noted that rapidly changing societies would suffer from anomie, or a condition of normlessness. People would not know what the norms (or behavioral expectations) were, and even if they understood the prevailing social rules, they may not obey them if they were not bound by a sense of moral obligation to others. Durkheim argued that in modern urban societies, individuals are without social ties and thus "no force restrains them."

Durkheim's development of the social fact concept has influenced empirical life course sociologists, who meticulously document the ways that social group memberships, such as race, class, gender, religion, and birth cohort, shape personal trajectories. His theorizing on social integration has shaped scholars' thinking about the ways that family, peers, religion, neighborhoods, and other social ties affect individuals at every stage of the life course. As Durkheim observed, such social classifications have an existence of their own and are themselves forces as real as physical forces (Durkheim 1997 [1897], p. 309).

**SEE ALSO** Volume 2: *Social Integration/Isolation, Adulthood; Social Support, Adulthood; Suicide, Adulthood;* Volume 3: *Social Integration/Isolation, Later Life; Social Support, Later Life; Suicide, Later Life.*

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*Deborah Carr*

# E

## ECONOMIC RESTRUCTURING

Economic restructuring refers to a global change in the nature of labor markets that began in the late 1970s. The restructuring of economies across the globe generally took two forms: (a) declines in manufacturing or goods-producing industries and growth in service and information industries; and (b) increases in the transfer of business activities to external service providers (outsourcing), in contracting others for specialized jobs (subcontracting), and in temporary and part-time work contracts. These industry shifts altered the fundamental nature of work as firms, seeking to attain or maintain their competitive advantage in increasingly global markets, reduced their reliance on skilled workers by fragmenting work-related tasks and increasing their use of technology in the workplace. The result, as noted by Harry Braverman (1974), is what sociologists call *deskilling*, or the downgrading of jobs and occupations. At the same time, firms exercised cost-reduction practices such as mass layoffs, outsourcing, and substituting full-time with part-time workers to make themselves competitive. These demand-side changes in the labor market resulted in higher unemployment, lower wages, larger income disparities, and a dwindling supply of jobs with promotion ladders. Economic restructuring thus changed the context in which people's work lives unfolded over the life course.

### CAUSES OF ECONOMIC RESTRUCTURING

The restructuring of labor demands occurred throughout the 1980s and 1990s in countries across the world. Altough the causes of this restructuring have been debated, one causal factor that scholars agree on is globalization, or the flow of capital, goods, and people across national boundaries. Globalization facilitated the spread of technologies that were instrumental in the production of new ideas and innovations. Embodied in new products, new production processes, and new ways of organizing work, as Manuel Castells (1989) points out, the spread of technologies contributed to the growth of new economic activities. China, India, South Korea, and Japan, in particular, accelerated the pace of technology and scientific advances to improve their capacity to innovate.

A second important factor that fueled the restructuring of labor markets in industrialized nations is the state. National governments, in partnership with financial institutions, designed and implemented industrial policies to improve competitiveness in global markets. As Michael J. Piore and Charles F. Sabel (1984) explain, a number of countries adopted neoliberal economic policies, or strategies based on principals such as free trade in goods and services, free circulation of capital, and freedom of investment. In other words, countries sought to promote economic development by minimizing government regulation in the market in order to increase international trade relationships and manipulate industries and labor markets. For example, the Mexican government implemented a series of policies, endorsed and supported by international financial institutions and the U.S. government, that allowed the country to move away from its model of nationalized industrialization toward a market-driven model of competition and exports. By implementing new economic growth strategies, according

to Alejandro Portes and Kelly Hoffman (2003), Mexico was able to manipulate its industry base by trading its low labor costs for capital investments with countries like the United States.

The combination of globalization and state actions profoundly and fundamentally altered the economies of a number of countries. Globalization opened up new markets, industries used technological advancements to improve product designs and the quality of services, and national governments rearranged and reorganized the labor market through trade policies. Economic restructuring can thus be seen as a form of structural change because it systematically and widely changed employment and production processes, with long-term consequences for nations, firms, and the lives of individuals.

## UNEVEN CONSEQUENCES OF ECONOMIC RESTRUCTURING

Throughout the 1980s and 1990s, as Saskia Sassen (1991) notes, new economies were taking shape, showing rapid growth in financial and business services and sharp declines in manufacturing industries. These industry shifts generated global cities connected to each other by technology, trade, and production. New York, Tokyo, and London, for example, evolved into centers of finance and top management in part because most financial transactions between Japan, the United States, and the United Kingdom were concentrated in these cities.

At the same time, economic restructuring had devastating effects on some nations. Barry Bluestone and Bennett Harrison (1982) indicate that countries such as Sweden, the United Kingdom, and the United States witnessed growing class inequality. Much of this inequality was directly linked to the disappearance of blue-collar manufacturing jobs that required full-time workers, provided on-the-job training, and offered job mobility. Massive layoffs contributed to high unemployment rates among skilled blue-collar workers who faced shrinking job opportunities. Other blue-collar workers experienced underemployment because low-skill jobs in the growing service sector offered much lower wages, little opportunity for career advancement, and modest training. As manufacturing jobs continued to fade in a labor market with shifting priorities, traditional blue-collar workers and workers without a college degree were vulnerable. Overall, as Emilio A. Parrado and René M. Zenteno (2001) point out, the decline of manufacturing industries left workers facing stagnant career opportunities, weak attachments to the labor market, and downward mobility.

At the other end of the employment spectrum, economic restructuring stimulated unprecedented job growth in professional and managerial occupations. Frank Levy (1998) points out that employees with high levels of education saw their wages increase and unemployment levels drop. Individuals in these occupations benefited greatly from the reorganization of the economy. Changes in technology and information systems made it possible for highly educated workers to bargain with employers for flexibility, often through telecommuting, home-share work, and job-sharing, according to Leslie McCall (2001).

The consequences of restructuring went beyond falling wages at the bottom of the labor market, rising wages at the top of the labor market, and consequent increases in income inequality. Economic restructuring produced changes in the organization of work that had contradictory effects on women's work lives. On the one hand, the new organization of work undoubtedly shaped women's career choices. For example, the growth of part-time work allowed many women to enter the labor force (McCall, 2001). On the other hand, as Barbara Reskin and Patricia A. Roos (1990) note, occupations that were once predominantly male, such as nursing and clerical jobs, resegregated as they became predominantly female.

As Maria Charles (2005) observes, occupations in a number of industrialized nations were often influenced by cultural beliefs about what men and women are good at. For example, Mary Brinton (2001), in her comparison of Taiwan and Japan, found that large firms in Japan have mobility ladders for men but not women; in contrast, small, family-owned firms in Taiwan create opportunities for female family members to participate in the management of the firm. For women, the downside of economic restructuring was twofold. First, industry changes that encouraged women's labor force participation and new occupations contributed to "mommy tracks" in corporate environments. Second, growing income inequality adversely affected low-wage women as their wages fell and because they did not benefit from the flexibility that high-wage earning women did (McCall, 2000).

Another consequence of economic restructuring is the growth of "under the table" or "off the books" work, or economic activity that occurs outside the formal economy, which is regulated by economic and legal institutions. In the 1980s labor unions were hit hard by the rise in international trade, policies that favored employers, and economic restructuring. The power and protection that labor unions once provided workers withered away as new economic activities emerged. Facing rising unemployment rates and falling wages, workers in many countries turned to informal work for additional sources of income. For example, garment workers in industrialized and nonindustrialized nations saw their wages fall and jobs transformed into informal and home-based work that is neither recognized nor protected by law. With no formal employer, these workers get their own

materials, make the garments, and find markets to sell their goods.

### UNRESOLVED ISSUES

Although social scientists have documented the extent to which economic restructuring has fragmented and stratified groups by gender, income, and race, there are issues that remain unresolved. First, sociologists do not yet fully understand why economic restructuring has resulted in greater disparity among women. McCall (2001) argues that if the goal is to move toward equitable economic growth and higher wages for women across the board, gender scholars must continue to investigate the causes of rising income inequality among women. These investigations should explore the consequences of labor market policies that shape the career trajectories of men and women. For instance, research on company decisions and policies regarding gender equity would be helpful for understanding whether organizational change subordinates equity issues or enhances women's careers (McCall, 2001).

A second unresolved issue connected to economic restructuring relates to marriage and family life. Since the late 1990s research has shown that declines in marriage among low-educated women have been shaped by the eroding labor market opportunities for low-educated men, who thus appear to be poor prospects for marriage. In contrast, as Daniel T. Lichter and Diane K. McLaughlin (2002) observe, for highly educated women the retreat from marriage is less about the earning power of men and more about rising female earnings, which permit greater independence. To understand the relationship between the labor market and marriage, sociologists continue to debate why growing income inequality, a change produced by economic restructuring, has led to the retreat from marriage across the board.

Finally, because researchers have focused much of their attention on the patterns of wage and income inequality, less is known about how economic restructuring has affected the work histories of individuals. For example, questions remain about the rate of job change that individuals experience and how the sequence of job changes unfold over the life course.

**SEE ALSO** Volume 2: *Employment, Adulthood; Globalization; Income Inequality; Occupations; Policy, Employment.*

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***Jacqueline Olvera***

## EDUCATIONAL ATTAINMENT

Educational attainment has been of long-standing interest to life course scholars. That interest results from several factors, including the role of education in nation-state development (Meyer, Tyack, Nagel, & Gordon, 1979), children's socialization (Sewell & Hauser, 1980), and adults' earnings (Card, 1999). As educational attainment has risen since the middle of the 20th century, the modal trajectory of the life course has changed, and researchers have tried to document the amount of schooling in populations and key subpopulations and to identify the determinants of educational attainment.

### MEASUREMENT AND TRENDS IN EDUCATIONAL ATTAINMENT

Analysts measure educational attainment in two ways. One approach involves counting the years of school a person completes. To document the educational attainment of a population, analysts report the mean (i.e., average) or median years of school completed. A second approach entails recording whether a person has attained certain key markers, such as a high school diploma, a bachelor's degree, or entry to advanced degree study. One then may calculate the proportion of persons in a

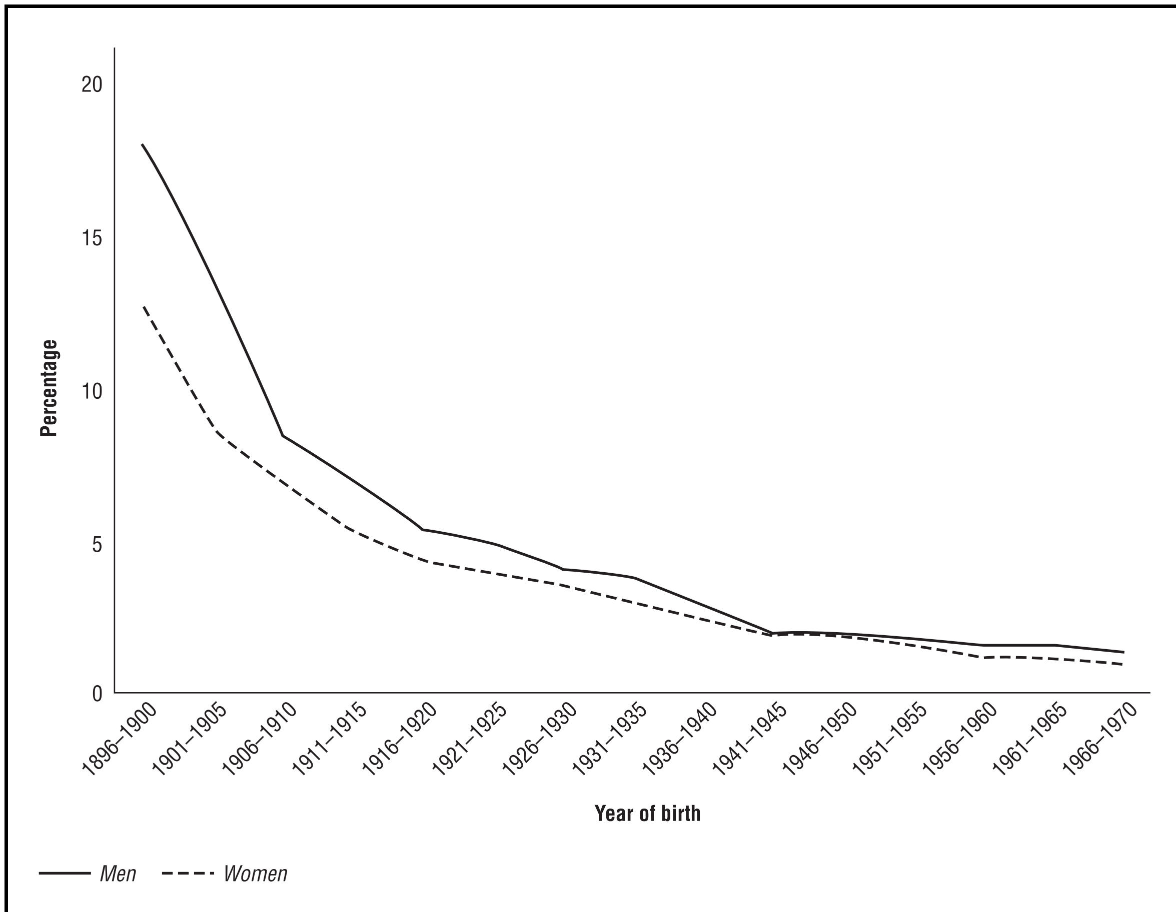


***Figure 1.*** *Percentage of persons completing four years of school or less, by sex and year of birth.* CENGAGE LEARNING, GALE.

population or subpopulation who have reached those thresholds.

By any measure, the level of educational attainment rose between 1901 and 2000. Throughout the 20th century in the United States the mean years of schooling increased for each succeeding cohort (Snyder & Hoffman, 2001). Further, the century witnessed a sharp decline in the proportion of persons with very low levels of education (Mare, 1995); corresponding increases in the proportions graduating from high school, entering college, and completing a bachelor's degree also were observed (Mare, 1995). The United States was not alone, as levels of educational attainment rose throughout the world during the 20th century (Shavit & Blossfeld, 1993).

Historically in the United States women have equaled or surpassed men's likelihood of completing high school, whereas men have exceeded the college attendance rates of women. With the birth cohorts of the mid-1950s, however, women surpassed men in the likelihood of college entry, and by the birth cohorts of the early 1960s women equaled men in the likelihood of obtaining a bachelor's degree (Mare, 1995). Thus, there are complex relationships among gender, cohort, and educational attainment.

Race/ethnicity is another sociodemographic factor that is associated with educational attainment. As of 2007, 93.4% of White persons 25 to 29 years old had completed high school, whereas for African Americans and Hispanics only 86.3% and 63.2%, respectively, had completed high school (Snyder, Dillow, & Hoffman, 2007). However, many Hispanics age 25 to 29 may not have obtained their schooling in the United States; consequently, the extent to which the completion rate reflects the operation of education systems in the United States is not clear.

An additional complexity concerns African Americans. When researchers control for (or hold constant) socioeconomic factors, the Black–White high school completion gap disappears (Bauman, 1998; Lucas, 1996). Researchers routinely find that those of higher socioeconomic status (SES) go further in school. The robustness of

this finding has motivated ongoing efforts to explain why SES matters.

## UNDERSTANDING THE CAUSAL EFFECT OF INDIVIDUALS' SES

Most educational attainment research is based on the presumption that well-developed educational systems exist. However, an individual cannot enter school, stay in school longer, or pursue postsecondary education unless educational institutions are constructed, expanded, and maintained. The historical process through which schools were constructed and expanded is contested. Key explanations that have been offered characterize the development of educational institutions as a nation-building activity (Meyer & Rubinson, 1975), a result of diffusion processes linked to the world system (Meyer, Ramirez, Rubinson, & Boli-Bennett, 1977), and a tool used by capitalists to create disparate forms of consciousness to slot persons into different—and unequal—positions in the economy (Bowles & Gintis, 1976). A full consideration of the institutional underpinnings of educational attainment must consider theories such as these, which view education from the macrosocial perspective. However, most research centers on explaining individual differences in educational attainment within a single institutional context.

The Wisconsin Social-Psychological Model of Status Attainment (the Wisconsin model) offers a social-psychological explanation for differences in educational attainment (Hauser, Tsai, & Sewell, 1983; Sewell & Hauser, 1980). The original work used Wisconsin Longitudinal Study data on Wisconsin high school graduates of 1957, but replications have extended the model nationwide (Alexander, Eckland, & Griffin, 1975) and beyond (Hansen & Haller, 1973; Nachmias, 1977).

The key factor in the Wisconsin model is the influence of significant others—encouragement by parents, teachers, and peers—as perceived and reported by the child. The higher their SES or academic performance, the greater the encouragement children perceive. The influence of significant others directly affects a child's educational aspiration and occupational aspiration, and educational aspiration affects educational attainment.

The Wisconsin model offers a powerful explanation of observed variation in attainment. The model explains 45% of the variation in significant others' influence, 74% of the variation in educational aspirations, and 68% of the variation in educational attainment. Further, it explains 73% of the variation in early career occupational status and 69% of the variance in occupational status at midlife (Hauser et al., 1983). By any estimation, this theoretical model provides a robust explanation of the process of educational attainment.

However, there are other explanations of the relationship of SES and educational attainment, although none provides the level of explanatory power of the Wisconsin model. The Wisconsin model contrasts sharply with the biogenetic explanation of variation in educational attainment. Biogenetic theorists see ability as the driver in educational attainment; ability is viewed as largely determined by one's genes, and genes are determined by one's parents. To complete the circle, assortative mating on educational attainment and other markers of social class reinforce distinctions of ability (Herrnstein & Murray, 1994).

Genetic explanations of educational attainment differentials have been refuted on scientific grounds. In *Inequality by Design: Cracking the Bell Curve Myth,* Claude Fischer and colleagues (1996) provided a thorough refutation of the biogenetic explanation of social inequality, including inequality in educational attainment. Additional authors, motivated perhaps by the apparent staying power of the biogenetic thesis in the popular imagination, have provided additional refutations (Devlin, Fienberg, Resnick, & Roeder, 1997; Jencks & Phillips, 1998).

Education researchers have found more support for human capital theory, which has affinities with the Wisconsin model. According to human capital theory, adults' productivity is a function of two factors: ability and investment. Individuals invest in their productivity in various ways, such as by acquiring skills through education. With all else equal, the more are able to invest more. However, ability is not completely free to develop, as many individuals face credit constraints and thus cannot make investments they otherwise would make (Becker, 1962). Hence, the socioeconomic gradient in education is due partly to credit constraints that prevent the poor from obtaining levels of education consonant with their ability (Becker & Tomes, 1986; Tomes, 1981). Thus, human capital theory suggests and explains a high association between parent and child educational attainment.

In *Reproduction in Education, Society, and Culture,* Pierre Bourdieu and Jean-Claude Passeron (1977) provided another theoretical explanation for the association between parental status and educational attainment. They contended that schools reward behavior that complies with the norms and standards of the dominant group in a society, yet those authors also noted that one's core (or habitus) develops in the family, is difficult or impossible to change, and directly affects one's likelihood of educational success. Bourdieu (1986) allowed one to interpret the association between parental status and educational attainment as resulting from gatekeeper exclusion, arbitrarily selected criteria of evaluation that advantage the previously advantaged, and parent–child interaction.

These broader theories highlight the ways individuals navigate systems of education by using their personal

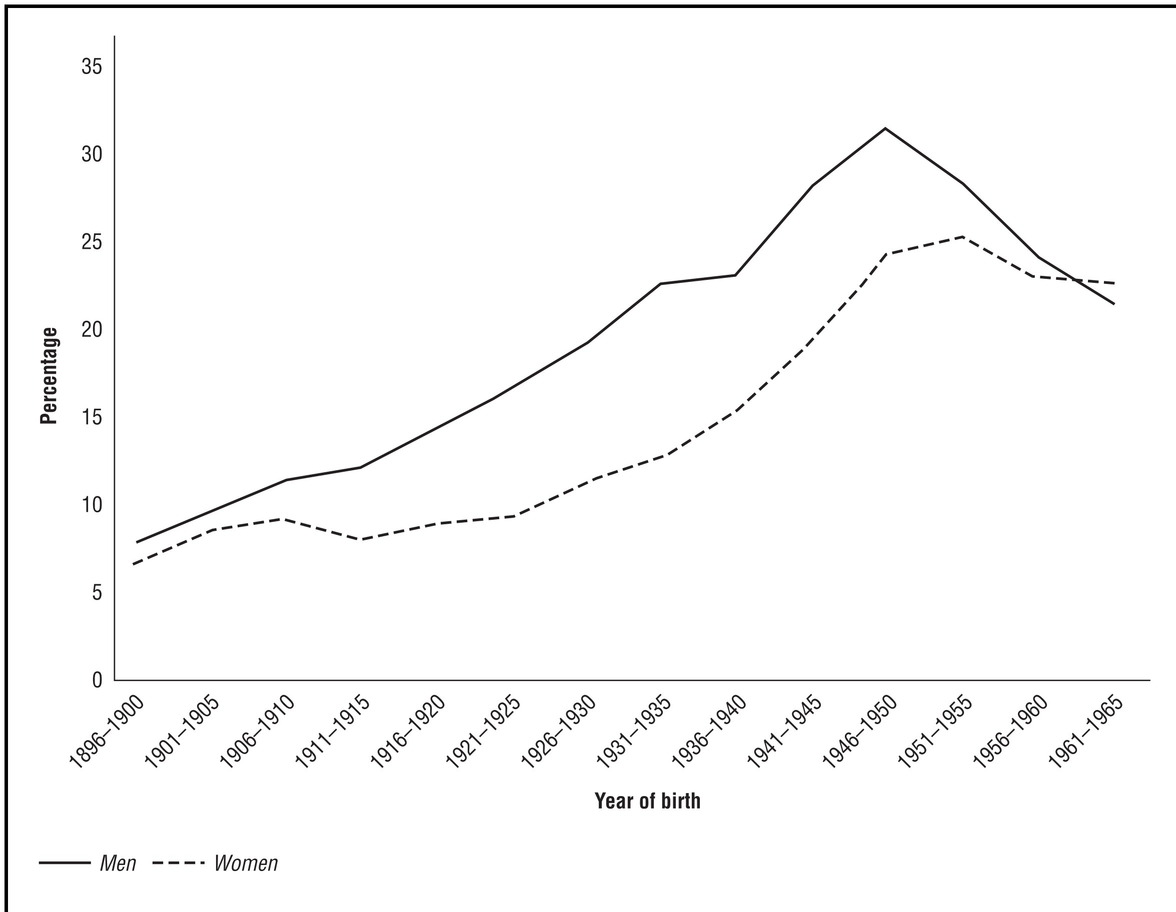


***Figure 2.*** *Percentage of persons completing at least a bachelor's degree, by sex and year of birth.* CENGAGE LEARNING, GALE.

resources as well as those provided by their families. More recent research highlighting cross-national comparisons has moved toward integrating macro-level considerations into the understanding of the production of educational attainment.

### INDIVIDUAL-LEVEL FACTORS IN THE CONTEXT OF MACRO-LEVEL DEVELOPMENTS: THE DIFFERING SOCIOECONOMIC GRADIENTS OF EDUCATIONAL ATTAINMENT

Cross-national comparative research has deepened analysts' understanding of educational attainment. The move to cross-national comparative research led researchers to recognize a problem with studying years of schooling. In response, Robert D. Mare (1980, 1981), following the work of Stephen E. Fienberg and William M. Mason (1978), observed that a person's years of schooling reflects a series of separate decisions to stop or continue schooling. Mare proposed that scholars could resolve the challenge raised by studying years of schooling by investigating the sequence of transitions instead. This education transitions approach (the Mare model) has become the standard for studies of educational attainment. The Mare model allows social scientists to observe (a) the changing association between socioeconomic background and educational attainment across transitions, (b) the different association between socioeconomic background and any particular transition across nations, and (c) the different association between socioeconomic background and any given transition across birth cohorts.

In his original research, Mare (1980) discovered a pattern of waning associations across transitions. Subsequent research replicated that finding with data from Israel (Shavit, 1993), France (Garnier & Raffalovich, 1984), Japan (Treiman & Yamaguchi, 1993), Sweden (Jonsson, 1993), Taiwan (Tsai & Chiu, 1993), and many other countries (Shavit & Blossfeld, 1993). Researchers also have detected stable associations across cohorts in the same country. Analysts have offered several theories to explain one or both of these patterns.

Mare (1980) originally proposed that selective attrition explained the waning association pattern. Fundamentally a statement of the statistical relations underlying the observed pattern, this explanation was revealed to be insufficient when the implications for the pattern of socioeconomic effects across cohorts were not observed (Shavit & Blossfeld, 1993) and when the statistical relations were shown to hold in a cohort even when the pattern of waning associations did not (Lucas, 1996).

Walter Müller and Wolfgang Karle (1993) proposed a life course perspective (LCP) to explain the pattern of waning associations between social background and educational attainment across successive transitions. They noted that students, older at each transition, depend less on their parents both socially and economically with each passing year. Hence, changes in the parent–child relation make parental characteristics decline in importance as a child matures.

Adrian Raftery and Michael Hout (1993; see also Hout, Raftery, & Bell, 1993) provided a further explanation for waning associations across transitions and changing associations across cohorts. They postulated four tenets of maximally maintained inequality (MMI). First, expansion of secondary and higher education reflects increased demand generated by population increase and the rising level of parents' education caused by earlier education expansion and other factors. Second, if enrollment rises faster than demand, the socioeconomically disadvantaged obtain more schooling. Even so, the socioeconomic association is unchanged. Third, if completion of a level of education becomes universal for higher SES persons, the effect of social background on that transition declines but only if educational expansion cannot be maintained otherwise. Fourth, falling SES can reverse and become rising effects; for example, if government support for educational attainment is reduced, socioeconomic effects will increase.

The fourth claim is a key difference between MMI and LCP. LCP emphasizes that as children age, they become increasingly independent of their parents and thus socioeconomic effects inexorably decline across transitions. MMI implies that adolescents' independence itself depends on the sociopolitical context and the resulting social support for particular levels of education.

Richard Breen and John H. Goldthorpe (1997) offered a rational choice model of relative risk aversion (RRA) to explain stable class differentials across cohorts, declining class effects across transitions, and rapidly changing gender effects. RRA draws on the Wisconsin model by highlighting perceptions of likelihood of educational success that are driven in part by ability and draws on human capital theory by highlighting cost constraints. However, Breen and Goldthorpe added the proviso that persons are risk-averse and seek to attain a social class at least equal to that of their parents.

RRA interprets MMI as a special case in which costs decline across the board for all classes. RRA claims that if costs decline differentially for different classes, the patterns highlighted by MMI will not occur. RRA points to rapid decline in the gender effect owing to changes in perceptions of appropriate roles, and thus likely levels of educational success. In Sweden, a rare case occurred in which class effects did decline with expansion owing to effective support for the education of disadvantaged children.

Although RRA is generally applicable to any choice set, both LCP and MMI explicitly concern attainment only. This is important because the traditional Mare model ignores potentially important qualitative differences in schooling. Richard Breen and Jan O. Jonsson (2000) found that the power of socioeconomic background varied with the path students took to their completed educational attainment. They concluded that suppressing qualitative distinctions weakens the understanding of the role of social background in educational transitions.

Consistent with that insight, Samuel R. Lucas (2001) proposed the theory of effectively maintained inequality (EMI), which considers both qualitative and quantitative dimensions of inequality. Lucas contended that socioeconomically advantaged actors secure for themselves and their children advantage wherever advantages are commonly possible. If quantitative differences are common, the socioeconomically advantaged obtain quantitative advantage. If qualitative differences are common, the socioeconomically advantaged obtain qualitative advantage.

Articulated as a general theory of inequality, EMI explained socioeconomic effects on educational attainment in one of at least two ways. When a particular level of schooling is not universal (e.g., high school completion throughout the first half of the 20th century in the United States), the socioeconomically advantaged use their advantages to secure that level of schooling. However, once that level of schooling becomes nearly universal, the socioeconomically advantaged seek out whatever qualitative differences there are at that level, using their advantages to secure quantitatively similar but qualitatively better education (e.g., qualitatively better, more challenging curricular tracks). EMI notes that actors' foci may shift as qualitative differences supplant quantitative differences in importance; alternately, actors may care about qualitative differences even when quantitative differences are common. Either way, EMI claims that the socioeconomically advantaged will use their advantages to secure both quantitatively and qualitatively better outcomes.

Each theory considers individual-level differences in larger dynamics—family dynamics, population dynamics, or power dynamics—all of which potentially differ across time and place according in part to social and political factors. In this way these theories provide resources for integrating macro-level narratives of the development of education systems with the micro-level narrative of persons' navigation of those systems.

## FUTURE RESEARCH

LCP implies an inexorable pattern of declining social background effects regardless of the situation. As researchers have found that this pattern reverses at times (Lucas, 1996), the claim of inexorable forces pushing weaker social background effects at older ages cannot be sufficient. However, it remains unclear whether MMI, RRA, or EMI best explains the pattern of socioeconomic background effects on educational transitions. Evidence consistent with each of the remaining three theories has been found. However, rarely have multiple theories been considered simultaneously. Hence, most studies are demonstrations of empirical patterns consistent with a focal theory, not efforts to test multiple theories on the same phenomenon to eliminate some from consideration. Future progress requires analysts to test the existing theories against one another under different conditions.

The effort to evaluate the theories is not aided by MMI and EMI sometimes being confused with each other (Tolsma, Coenders, & Lubbers, 2007). Some analysts fuel the confusion by merging EMI and MMI into one theory (Hout, 2006). Merging EMI and MMI, however, makes little sense because the two theories fundamentally disagree. Notably, MMI claims that socioeconomic inequality will be reduced through educational expansion, whereas EMI states unequivocally that education expansion need not reduce socioeconomic inequality. Thus, MMI points the way to a simple public policy response to socioeconomic inequality in education: expand schools. EMI maintains that expanding schools is insufficient because a plethora of qualitative differences in education can sustain inequality.

The reasoning behind this disagreement is that MMI states that for a transition made by every student or nearly every student the socioeconomic association will be zero and thus social conflict will be zero too. EMI directly contests this claim, explicitly stating that conflict may occur at universal transitions, may be intense, and will concern qualitative dimensions that matter for ultimate attainment. EMI points directly to the contestation around high school tracking as one example of intense class-based contestation at a nearly universal transition (Lucas, 2001; Wells & Serna, 1996). Consequently, MMI and EMI disagree on the crucial sociological point of what occurs when a transition is universal, suggesting that any merger of the theories can only produce an ad hoc melange.

Indeed, Hout's (2006) proposed merger appears ad hoc, as indicated by the statement that "MMI and EMI predict slow and contingent change over time in how strongly family background affects educational opportunity" (p. 239). Although MMI makes this prediction owing to its emphasis on slow-moving population dynamics such as changes in levels of parents' education, EMI suggests that the pace and pattern of change, if any, depend on the mix of qualitative and quantitative goods and thus need not be slow. As another example, Hout stated, "As post-secondary education expands, we can expect the association between family background and educational attainment to weaken.... I will propose an appropriate statistical model, fit it in each... country, and assess MMI/EMI in light of the results" (p. 240). Although MMI explicitly argues that large-scale educational expansion will lower the effect of background on educational attainment, the definitive claim of EMI is that educational expansion may fail to alter the effect of social background because the existence of qualitative positions may undermine the egalitarian impact of educational expansion. Thus, Hout's amalgam of EMI and MMI actually reflects only MMI.

In the few studies that have considered multiple theories, the empirical evidence contradicts MMI but is consistent with EMI, suggesting that any synthesis faithful to one will shortchange the other and any synthesis faithful to both will be incoherent. In the original paper on EMI, Lucas (2001) found support for MMI over LCP but support for EMI over both for 1980 U.S. sophomores. Hannah Ayalon and Yossi Shavit (2004) considered MMI and EMI in analyzing reforms of the Israeli educational system. They found that EMI offers a better explanation than MMI. Further work in Israel that focused on higher education institutions and field of study also preferred EMI (Ayalon & Yogev, 2005). If two theories disagree and analyses support one over the other, merging them is likely only to obfuscate matters.

The unhappy marriage of EMI and MMI may stem from the generality of EMI. Although EMI researchers have focused on education, EMI offers a general theory of inequality that is applicable beyond education. In contrast, MMI tenets pertain narrowly to education. Hence, pushing EMI and MMI together undermines both the reach of EMI beyond education and the utility of EMI for studies of education, a utility that has been proven in straight-up comparisons of EMI and MMI in existing research. For these reasons, combining the theories is unwise.

More research is needed to determine which of the existing theories, MMI, RRA, or EMI, best explains

patterns of socioeconomic effects on education transitions and under which conditions one theory is preferable. The selection of a theory has ramifications for the understanding of how educational attainment works and for the prospects of and methods for altering the patterns of social background effects. Thus, it is important to keep the theories distinct so that researchers can understand the dynamics of socioeconomic inequality and educational attainment.

**SEE ALSO** Volume 1: *Cultural Capital; High School Dropout; School Transitions; Socioeconomic Inequality in Education; Stages of Schooling;* Volume 2: *Continuing Education; Social Class.*

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***Samuel R. Lucas***

# EMPLOYMENT, ADULTHOOD

Employment as a distinct sphere of life that entails significant training and expertise is unique to the modern world. When humans were hunters and gathers, work was not separated from leisure. People gathered or hunted food, made tools, cooked, relaxed, made shelters, and tended children in a fluid mix throughout the day. With the development of agriculture, work became more separate from leisure because tilling the fields required long and hard labor. Under classical empires such as the Mayan, Aztec, and Egyptian, many agriculturalists were enslaved and became subject peoples who worked as slaves or bonded laborers. Leisure was reduced to a minimum or disappeared. In contemporary societies, work, organized as paid employment, and leisure are highly distinct, with people working specific hours of the day and having leisure at home or in other settings different from the places where they work.

Work in modern society primarily takes the form of paid employment. Employment provides earnings that people use to buy the goods and services they once produced themselves, such as food and clothing. Modern society, however, provides a much richer set of goods and services than was available in earlier periods. An equally diverse set of industries and occupations produces those goods and services.

## DEFINING EMPLOYMENT

Employment generally is defined as work that generates earnings: either pay or, in the case of someone who is self-employed, profit. This definition highlights the modern orientation toward work as a means to acquire money. The definition of employment as paid work also necessitates the concept of unpaid work. Many household activities, such as cooking, cleaning, and mowing the lawn, require significant effort. These tasks typically are performed as unpaid labor. However, they also can be hired out to a maid, a repair person, or a lawn service company. Most people work for earnings, do quite a bit of unpaid labor, and sometimes hire out activities that they cannot do because of limited time or lack of skills. By contrast, leisure is composed of activities that people do purely for pleasure. There is a gray area, however, between unpaid work and leisure. For a parent, child care often seems like work, but it is also one of life's pleasures. Preparing a meal can be both work and a leisure activity. Shopping is a necessity and therefore is unpaid labor, but some people shop for fun. There is thus a continuum—complete with gray areas between these concepts—from leisure (activities purely for fun) to unpaid work (the chores of life) to paid employment (work for earnings). This entry focuses solely on paid employment. It is useful, however, to bear these related categories of activity in mind to understand the place of employment in people's lives.

Not everyone who would like to have a job is employed. People who lack employment but are looking actively for a job are considered unemployed. The labor force is the sum of these two groups: the employed and the unemployed. The labor force is the pool of people currently at work or available for work. The commonly reported unemployment rate is the number of unemployed (active job seekers) divided by the total labor force.

## EMPLOYMENT DEFINES PEOPLE

People's jobs define them in contemporary society. Gainful employment is a key marker of adult status. It allows financial independence and the establishment of one's

own household. Someone who is financially dependent often is treated by others as less than a full member of society with equal status and rights. Employment is thus the key to adult status.

Employment also defines people's friendship networks. Early in life people's networks are defined by their families; later they are defined by their schoolmates. After people enter the world of employment, their networks quickly shift to their work associates. This process is often accelerated by a geographic move, as in the case of a college graduate who relocates to start his or her career. However, even if new labor force entrants stay near home, they may spend so much time at work that their colleagues on the job become their new families. Old friends may slip away as one finds new friends, often with similar interests, in one's field of work.

Employment also defines a person's place in society through the level of earnings generated. In general, those in well-paid jobs live in larger homes in more exclusive neighborhoods, take more frequent and exotic vacations, and are able to send their children to expensive schools and colleges. Those who have jobs with lower earnings rent apartments or live in homes in more modest neighborhoods, take fewer and more local vacations (e.g., to visit relatives), and may struggle to help their children through college. Even politics follows employment. Many well-paid persons find sound reasoning behind Republican calls for low taxes and support of business. Those who are less well paid find greater resonance in Democratic calls for educational support, improved social services, and full employment.

Perhaps even more than friends and politics, employment defines people's identity and gives meaning to their lives. The best hours of the day, five or more days a week, and the best years of people's lives are spent working. When people introduce themselves, they most frequently say something about their work, such as, "I work at company X." Work is a foundation for identity because people get meaning and purpose from their productive activity and because many jobs in the contemporary economy are engaging or even fascinating. Practicing the skills of a doctor, lawyer, engineer, teacher, or carpenter can be rewarding. Who is a person as an adult? Most fundamentally a person is his or her job. The only status with comparable power is one's family, but with fewer children and more frequent divorce, the battle for identity increasingly is won by career rather than by family.

Along with its greater importance in people's lives, employment can bring great pressures. To the extent that others define people by their employment, people are more vulnerable to problems at work. If a person loses a job, that person may lose his or her friends, social class position, and economic security. In this context work-related problems can become major stressors in life. Fears of layoffs plague many people's lives. Bosses who bully their employees can make work unbearable; coworkers who gossip and slander can make it a nightmare.

## THEORIES OF EMPLOYMENT

Sociology has long been concerned with employment and its discontents. Karl Marx wrote eloquently on the plight of the working classes in early industrial society and provided important theoretical tools for the study of exploitation, inequality, and alienation. Émile Durkheim examined the same issues, also with great empathy, but came to different conclusions. He interpreted contemporary problems as transitory, arising from an increasing division of labor and rapid change. Those changes did divide society into warring classes, but the tension would be overcome by the emergence of new norms and values that would provide safeguards against abuse and exploitation. The new norms and values would be hammered out in employer, trade, professional, and employee associations arising from the new and more complex division of labor.

Max Weber focused less on inequality and more on the fact that in modern society people increasingly work in large bureaucratic organizations. Before the 20th century most companies were relatively small, employing at most a few dozen workers. The advent of modern industrial society has meant not only the emergence of new class conflicts but also the emergence of the modern bureaucratic form of organizing work on the basis of written rules and formal criteria for hiring and promotion. Weber recognized the immense efficiencies emerging from such regularized procedures, especially relative to earlier forms of organization that were based on nepotism and cronyism. However, he also gave voice to those who experienced bureaucracy as stifling. Prior systems were inefficient and corrupt, but bureaucracy was rigid and ungainly. Weber feared that the efficiencies of bureaucracy would lead to its inevitable spread and the eventual universal dominance of bureaucratic procedures, with the attendant stifling of creativity and initiative. Workplace innovations that allow greater initiative among self-monitoring teams are the latest response to the rule-driven nature of modern work. Their limited success in reducing bureaucracy speaks to the potency of bureaucracy and people's continuing struggles to tame it.

Modern theories of work often are grounded explicitly or implicitly in the writings of Marx, Durkheim, and Weber. However, contemporary theories have added to those broad models of societal conflict and change in at least two major areas, both of which involve a more detailed examination of the employment experience.

Sociotechnical theories focus on social interactions at work, both those between bosses and workers and those among coworkers, and on the technical and physical conditions of work. These theories grew out of the observation that employees respond much better to encouragement and humane direction than to bullying. Because of their focus on workplace social relations, these theories sometimes are called human relations approaches.

A related set of theories grew out of the observation that the formal world of bureaucratic rules and shouting bosses is often only a small part of what constitutes the lived experience of work. Employees constantly maneuver, interpret, and respond to the formal employment situation and in so doing develop their own interpretations of work. This focus on the negotiated order of the workplace highlights the constantly negotiated and renegotiated nature of work life. Even more than the human relations approach, it recognizes the employee as an active coparticipant in the employment relationship.

## METHODS OF STUDY

The methods by which contemporary sociologists learn about employment are as diverse as the topic and theories of employment. These methods can be grouped into three categories: surveys, ethnographies, and the use of archival data. All three methods rely heavily on empirical data and are thus part of the general movement in social sciences toward empiricism and away from broad social theories and philosophies.

Social surveys focus on individuals as respondents, most typically employees but also potentially managers or even chief executives. Given the chance, people love to talk about their work. Common survey themes include job satisfaction, autonomy at work, relations with management, coworker relations, job insecurity, stress, and burnout. Surveys are the major source of information about contemporary employment. In an effort to protect their interests or their self-respect, however, survey respondents are not always forthcoming about their experiences. At a minimum their responses to questions about work are filtered to be consistent with their broader sense of identity before being shared with an interviewer.

Accordingly, researchers sometimes seek more personal contact with employment situations rather than taking reports about work at face value. Such a type of contact can be obtained by shadowing a group of workers over time (nonparticipant observation) or by gaining employment in a workplace and experiencing its joys and burdens directly (participant observation). Such studies are called ethnographic accounts. Workplace ethnography is a significant genre of workplace studies and makes for interesting reading because of the details it provides about the dignity, tragedy, and humor that pervade work life. A classic example is Alvin Gouldner's (1954) *Patterns of Industrial Bureaucracy*.

The third major approach to empirical studies of the workplace uses prerecorded or archival data. Employment records; government reports on occupations, enterprises, and industries; discrimination cases; and any other event or activity that leaves a recorded trace can supply data for these studies. Archival data are particularly useful for extending observations across a range of employment situations and a greater time span, avoiding the significant limits of survey and ethnographic methods. The information from such studies has been foundational for the study of employment trends, occupational growth and decline, globalization, the spread of technology, and other pressing employment issues of the 21st century.

## EMPLOYMENT TRENDS

Two major forces drive both overall employment levels and the nature of employment in the 21st century: technology and globalization. Technological advances in recent decades built around the microprocessor and the attendant ability to collect and access information not only have created new high-technology industries but have revolutionized production across almost all industries, resulting in dramatic changes in employment. Sophisticated mechanical devices from previous waves of automation are driven by computer technologies that allow much more flexible applications. These technologies have displaced manufacturing workers, with manufacturing in the United States employing under 15% of the labor force in the first decade of the 21st century—reduced by almost half from its historical peak of 28% in 1960. Information technologies also have been applied to other industries, increasing efficiency by providing more precise information. For example, the driving routes of package delivery companies are arranged and plotted by computer at the beginning of the day. Packages are delivered quickly and precisely, but the efficiencies reduce the number of drivers needed and add to economy-wide downward pressures on employment.

Globalization contributes to these pressures through the outsourcing of lower-paid work to poorer nations. A car or computer in the early 21st century is made of components manufactured across many continents, assembled in one of them, and potentially sold in another. Companies search relentlessly for the cheapest labor, sometimes inadvertently finding that their quest undercuts the market for the goods they are producing because their own employees cannot afford those products.

As a result of the combined pressures of technology and globalization, employment in industrially advanced nations is relatively stagnant, particularly in middle-class and working-class jobs that face automation and outsourcing. Growth areas include professional occupations

***Take Our Children to Work Day.*** *Dawn Sciabaras and her daughter Torie, 7, work on Dawn's computer during Sears' 'Take Our Children to Work Day' event at its world headquarters.* AP IMAGES.

such as law, medicine, and engineering and low-wage service work such as fast-food preparation, which cannot be outsourced. However, even fast food can be automated in vending machines. Downward pressures on middle- and working-class jobs in the industrialized nations have created an increasingly divided class structure of well-paid professional and managerial workers and poorly paid service workers chronically at risk of displacement by automation and globalization.

## GLOBAL EMPLOYMENT

Americans dominate their hemisphere and have world military supremacy. The 20th century often is referred to as the American century. Futurists, however, are calling the 21st century the Asian century. Globalization thus poses a clear challenge to the era of American and perhaps even Western dominance.

European and North American industrialized nations are struggling with the problems of downward employment pressures for the working and middle classes and increasing inequality in society. However, they are managing to stay even. Incomes are stagnant, at least in the aggregate, although they are increasingly unequal. The reason for this stagnation is that increasing productivity in these nations resulting from new technologies balances the downward pressures on incomes from automation and globalization. The result is stagnation that is seen as starting as far back as the 1970s.

The rest of the world is extremely diverse. Terms such as *less developed* belie this diversity. The least developed parts of the world, such as parts sub-Saharan Africa, basically play little or no role in the world economy. They cannot compete technologically with the European and North American nations or with developing nations such as China and India. The employment situation in such nations is dire, with unemployment rates of 50% or more in some cases. In contrast, the unemployment rate in the United States hovered around 6% in the first decade of the 21st century, whereas the Great Depression of the 1930s saw U.S. employment rates of 20% or more. Such situations are ripe for civil wars and conflicts, which are prevalent in many of the least developed nations.

In developing nations such as China and India the situation is different. Stable political situations with varying levels of democracy have provided a setting for economic growth and development. The jobs lost to outsourcing in the Western nations are reborn there, at wages that are lower than those in Europe and North America but are attractive to workers forced out of agricultural pursuits by increasing mechanization. The prospects for these nations are reasonably favorable. Earnings, at least in the aggregate, are rising, although poverty is still pervasive in many rural areas. It is easy for those in Europe and North America to think of workers in India and China as competitors who now have "their" jobs and to forget that they are paid substantially less for doing them than Westerners once were paid. It is unlikely, however, that these jobs will ever return to the West, and in the current global economy the fate and earnings of these workers are linked closely to those of people in the West. Their success in winning a bigger share of the economic pie may be a precondition for the stabilization of employment in the Western nations.

## GENDER, RACE, AGE, AND EMPLOYMENT

In addition to the class inequalities arising from employment, jobs are differentiated by the groups that typically occupy them. Thus, women, members of racial and ethnic minorities, the young, and the elderly often face additional employment challenges that are changing rapidly, only sometimes for the better.

In recent decades women have experienced significant gains in employment, especially in the Western nations, and now have at least some representation across all occupations. These gains rest on federal legislation such as the Civil Rights Act of 1964, which made discrimination against women and minorities illegal. Somewhat ironically in light of the primary focus of the legislation on minorities, women have been the primary beneficiaries of this law. Women are distributed equally across the class structure, and many are able to attain college educations and take advantage of new employment opportunities. Women of poorer and working-class origins have been less advantaged by these opportunities because their class origins create barriers to securing the higher education credentials necessary for better-paid employment.

At least two fundamental challenges remain for women. First, women still have a very limited presence in engineering and related fields. Available cultural scripts for women do not support the occupational choice of engineering, and as a result few women enter these relatively well-paid professions. Second and more fundamental, cultural norms and business practices create serious hurdles to combining work and family. Job expectations, especially in the professions and management, often involve open-ended commitments of 60 to 70 hours or more per week. Jobs of this sort allow little time for raising children. The most popular current solution is to delay childbearing. Society is in an important transition period between the breadwinner-and-housewife employment model and the two-earner model.

Ethnic minorities also have benefited from the increased opportunities afforded by antidiscrimination legislation. However, their gains have been more limited, leaving many behind. Many minority group members have not been in a position to take advantage of the new employment opportunities. Decades or even centuries of discrimination have produced stark inequalities of wealth and income. In combination with residential segregation, these inequalities mean that many members of minority groups attend poorly funded public schools and thus lack the background or finances necessary for success in college. Affirmative action programs intended to lower those barriers have provided educational and employment opportunities for many minority group members. The accumulated depth of poverty in many minority neighborhoods, however, remains a formidable barrier.

There also are age barriers to employment. In the United States the wide availability of bottom-rung jobs in retail and fast food means that young people often gain some employment experience, although the skills obtained may be minimal. In other Western nations more restrictive job markets often mean lengthy training and waiting periods for employment, resulting in high youth unemployment and careers that may not start until one's middle or late twenties.

Older people also face serious employment problems. Senior employees who are laid off, often because their earnings are high relative to those of younger coworkers, may have difficulty finding comparable employment and may end up underemployed in fast-food or retail service jobs. In other parts of the world these problem are even more serious. In China, for example, the generation of 50-year-olds often is called the unlucky generation. In their youth this generation experienced a violent civil war followed by the disruptions of the Cultural Revolution. By midlife they settled into what was destined to be a very brief period of stability, only to be turned out of their employment in state-owned enterprises as those companies downsized to become more market-oriented. Older workers in many nations are targeted during downturns and in reorganizations.

## EMPLOYMENT POLICY

The most important current employment challenges are the promotion of full employment and the provision of

living wages for all workers. Most employment policies involve tax subsidies to businesses or public provision of supporting infrastructure such as utilities and roads for business parks to encourage growth. Industry-specific policies also are used to incubate new industries and product lines that can be competitive in the global market. Japan and some other developing Asian nations have used such programs to break into world markets for automobiles, electronics, and steel.

Policies for living wages are always subjects of contention because businesses do not want to pay a living wage if they can hire workers for less and argue that they will be able to hire fewer workers if they have to pay them more. The empirical support for this position is mixed. Living wages for low-wage workers mean that they can spend more, thus producing more employment as a ripple effect.

Another challenge is to develop employment practices that are family-friendly. This can mean onsite day care or flexible hours. Fundamentally, it means fewer hours of paid work. Many contemporary jobs require too many hours of work to allow for family life, leaving children to be raised in after-school programs. The insight that shorter workdays could mean more employment is not lost on policy makers, as can be seen if one considers the consequences of breaking one 70 hour per week job into two 35 hour per week jobs. Many Western European nations have promoted reduced workweeks with this rationale. In the United States, where employment policy is left almost totally in the hands of employers, such policies have not been received warmly.

## FUTURE DIRECTIONS FOR EMPLOYMENT RESEARCH

Future directions for employment research closely parallel the policy challenges noted above. Important topics include the success of competing strategies for dealing with job creation, employment discrimination, and work–family tensions. Multimethod approaches involving combinations of survey, observational, and archival data have emerged as important research strategies. When information from a variety of methods is triangulated, the limitations of any single method can be offset. Comparative research is growing in importance. In essence, the world is engaged in a massive experiment to develop effective responses to the employment challenges of the 21st century. Social science researchers thus have both a laboratory for their studies and an important role to play in identifying employment problems and developing effective policy options. The life course of adults has become more variable and uncertain as a result of the employment of the late 20th and early 21st century. New and developing methods of study have the potential to provide important guidance for developing meaningful policies to assist people in finding new pathways to stable and productive lives during these times of dramatic and continuing change.

**SEE ALSO** Volume 1: *Maternal Employment;* Volume 2: *Careers; Economic Restructuring; Gender in the Workplace; Globalization; Income Inequality; Job Change; Job Characteristics and Job Stress; Leisure and Travel, Adulthood; Occupations; Policy, Employment; School to Work Transition.*

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***Randy Hodson***

# EMPLOYMENT PATTERNS AND TRENDS

**SEE** Volume 2: *Employment, Adulthood; Flexible Work Arrangements; Gender in the Workplace; Job Change.*

# EMPTY NEST

**SEE** Volume 2: *Midlife Crises and Transitions.*

# ETHNIC AND RACIAL IDENTITY

What does the term *racial and ethnic identity* mean? Briefly, when something is an identity, it is a part of self-concept. When something is part of self-concept, it influences how people make sense of themselves, what their goals are and how they try to achieve them, as well as the interpretations they give to others' responses to them. Racial and ethnic identity includes three basic components: (a) membership—knowledge that one is a member of particular racial and ethnic groups; (b) beliefs—beliefs about how the groups one is a member of fit into broader society and how members of these groups act, what they believe in, what their goals and values are, and the strategies they use to attain these goals; (c) action readiness—readiness to act in ways that are congruent with beliefs about group membership.

Race and ethnicity can be distinguished in theory: Racial categorization is often associated with beliefs about common physical characteristics that are thought to distinguish groups; these beliefs are often associated with power structures within a society. In contrast, ethnic categorization is often associated with assumed immigration histories and beliefs about shared nationality, history, language, and traditions. However, for a number of reasons, it may not be useful in practice to distinguish them. First, race and ethnicity are both social constructs, that is, their meaning is based on socially agreed-on categorizations, rather than on biologically meaningful categorizations. Second, both involve "imagined communities," groups with which one feels a sense of common fate or allegiance and a sense of common ancestry or kinship, whether or not one personally knows many group members. Third, in modern societies race and ethnicity intermingle. Therefore, this entry discusses racial-ethnic identities rather than attempting to separate the two concepts artificially.

Race and ethnicity are not always part of self-concept, but they often are because race and ethnicity carry social meaning and therefore are useful in making sense of oneself and one's experiences with others. As noted in the three-part operationalization of racial-ethnic identity, racial-ethnic identity includes more than simple knowledge of group membership, it includes both beliefs about one's group and readiness to take action congruent with these beliefs (see three-part operationalization, above). In this way, people's life courses will in part reflect their racial-ethnic identities.

## SELF-CONCEPT AND IDENTITY

The self is a basic cognitive structure; distinguishing self from non-self is an early developmental milestone. Self-concept is a theory about oneself, what one thinks about when one thinks about oneself; the self is experienced as content (who one was, is, and may become, how one fits in); and process (what one's goals are, what one is trying to do). The three basic self-processes are self-protection, self-improvement, and self-maintenance. Self-protection is involved when one's goal is to feel as good about oneself as possible given circumstances. Self-improvement is involved when one's goal is to critically focus on one's limitations in order to make changes for the better. Self-maintenance is involved when one's goal is to provide a stable anchor of self-knowledge from which to make predictions about self and others. A person's self-concept is involved in both intrapersonal processes (e.g., memory, motivation, and self-regulation) and interpersonal processes (e.g., interpretation of social contextual cues, reactions to feedback, relational style).

The idea of self-concept originates in the early theorizing of psychologist William James (1890). Within sociology, the term *identity* is more commonly used. However, modern usage of both terms overlaps in that individuals are assumed to define themselves with a multiplicity of self-descriptions. Thus, self-concept and identity are now seen as multidimensional, multifaceted, and dynamic structures, rooted in and sensitive to social contexts. For clarity, in this entry we operationalize the self-concept as containing diverse, potentially conflicting personal and social identities and self-schemas (cognitive generalizations about the self derived from past experience). Identities can encompass personal traits, feelings, images, and knowledge about the self as well as social memberships, social roles, and social statuses. Some of these identities are more central or "salient" to one's self-concept, while others are less central.

***Irish Step Dancers.*** *Irish step dancers performing in a St. Patrick's Day parade.* © BLAINE HARRINGTON III/CORBIS.

## RESEARCH ON RACIAL-ETHNIC IDENTITY

Theoretical development and empirical assessment of racial-ethnic identity draws on social identity theory. According to this perspective, social identities are the parts of self-concept derived from group memberships and adherence to group values (Tajfel, 1981). Social identities include at least three parts: information about group membership (that one is a member of one group and not of another), information about the nature of group boundaries (how permeable is membership, can one quit the group, how do others view one's group), and information about what it means to be a group member (including the norms, values, goals, and attitudes of one's group). From this perspective, racial-ethnic identities may influence behavior by providing information about group norms and expectations and by shaping a person's interpretation of social and contextual feedback (Oyserman, 2007). Perceived group norms can be positive. For example, Oyserman, Gant, and Ager (1995) found that when reminded of their racial-ethnic identity, African American students persisted more at math tasks if they believed that doing well in school was an in-group expectation. Perceived group norms are not always positive though. For example, Oyserman, Fryberg, and Yoder (2007) found that middle school, college-aged, and adult participants were less likely to believe that engaging in a healthy lifestyle is beneficial to one's health if they were reminded of their racial-ethnic identity and believed that people in their in-group did not engage in these behaviors.

Follow-up research suggests that among adult currently smoking African American women, smoking is more likely to be perceived as racial-ethnic identity congruent than it is among non-smokers. That is, smokers are more likely to believe that smoking was in-group normative, something that African Americans commonly do.

Social interactions are central in shaping both personal and social identities, including racial and ethnic identities (e.g., Turner, Oakes, Haslam, & McGarty, 1994). Most generally, who one is in the moment is defined in part by how one's interaction partner makes sense of oneself. In some sense, people have as many versions of themselves as they have interaction partners because different partners facilitate, encourage, and provide role models for different ways of being a self. Although active exploration of one's identity is considered

a primary developmental task during adolescence and young adulthood, self-concept and identity are not simply formed at this time and stable thereafter. Rather racial, ethnic, gender, and social class identities begin to develop in early childhood, and changes in social contexts influence identities throughout the lifespan (Demo, 1992). Whether race and ethnicity are part of identity and what this entails is likely to shift as well.

Early research on racial-ethnic identity focused on its content and possible implications for self-esteem (Clark & Clark, 1947; Proshansky & Newton, 1968). In the United States and elsewhere, this line of research focused on historically stigmatized groups (in the United States, African Americans and Jewish Americans). Researchers assumed that the experience of racism, hatred, or disdain from others toward one's racial-ethnic group would be internalized and result in self-hatred and self-disdain (Grambs, 1965; Nobles, 1973). However, the data did not support this idea, so conceptual and empirical models were refined to distinguish a sense of in-group (that is, persons sharing one's social group) worth and knowledge about out-group (that is, persons belonging to other social groups) responses (Cross, 1991). These newer models emphasized the importance of feedback from close, supportive in-group others (e.g., family, kin networks) for feelings of worth, as separate from racial-awareness, which focused on the negative attitudes and beliefs of out-group members (Gray-Little & Hafdahl, 2000; Phinney, 1996). As would be predicted by social identity theories, researchers demonstrated that a positive sense of self-worth was associated with feelings of in-group connection or pride. After the resolution of this conceptual debate, researchers developed new lines of inquiry, focused on identifying consequences of the content and structure of racial-ethnic identity for action, mood, and cognitive processes more generally.

Some evidence suggests that content of racial-ethnic identity matters in that how one describes one's racial-ethnic identity predicts behavior over time. In particular, how the connection between in-group membership and membership in broader society is described seems to influence how much individuals engage in the institutions of broader society. In terms of academic outcomes, teens who describe themselves only in terms of in-group memberships (e.g., American Indian, Black, Latino) were less likely to persist in academic tasks than teens who both described themselves in terms of in-group memberships and saw in-group members as integral members of broader American society, not as separate from broader American society (Oyserman, Kemmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003). Similarly, in terms of health outcomes, women who described themselves as African American were more likely to obtain a mammography than women who described themselves as Black (Bowen, Christensen, Powers, Graves, & Anderson, 1998). In each case, it seems to be that identity terms convey beliefs about how much the in-group fits into broader society.

Research examining the content of racial-ethnic identities has shown that not all persons incorporate race-ethnicity into their identity (Oyserman et al., 2003). For some individuals, membership in a racial-ethnic group is simply a social fact about oneself, something that may be true but is not self-defining. However, in societies in which race-ethnicity is used by others to make predictions about what one is like and one's skills and abilities, not including race-ethnicity in identity is likely to leave one open to the negative psychological consequences of negative stereotypes. Race-ethnicity is likely to be incorporated into one's self-concept when it feels meaningful—when race-ethnicity has an impact on how in- and out-group others respond to oneself. Like other social identities, racial-ethnic identities are multi-dimensional; that is, one knows many things about oneself as a group member, not all of which are salient at any moment in time. Moreover, like other aspects of self-concept, racial-ethnic identities can contain competing or conflicting information. Which aspects of racial-ethnic identity are salient and influential at any moment in time will depend on social contextual cues. For example, in academic contexts, content and identity-relevant questions focused on academics (do "we" do well in school?) are likely to come to mind.

Research on racial-ethnic identities explores the ways that such identities affect well-being, motivation, goal pursuit, and behavior. Of particular interest are dimensions of identity including sense of connection to in-group, beliefs about the relationship between in-group and broader society, and beliefs about the goals, activities, and strategies effectively used by in-group members (Oyserman, 2007, in press). Sense of connectedness to the group focuses on the extent to which individuals perceive in-group membership to be central to their self-concept. Identities that are not central are less likely to be activated so are less likely to have an impact on behavior. Beliefs about the relationship between in-group and broader society are sometimes described in terms of the perceived boundaries between in-group and other groups and awareness of the attitudes of others toward one's racial or ethnic group. Knowing how others view one's in-group can provide important information about likely responses of others to oneself. More broadly, this dimension involves perceptions about the connections (or lack thereof) between in-group and broader society. The third dimension of racial-ethnic identity focuses on beliefs about in-group goals, attitudes, norms, values, and strategies. These beliefs are not necessarily accurate, but because they provide standards that are assumed to be accurate and self-relevant, they are likely to

influence one's own goals, attitudes, norms, values, and strategies. These beliefs can have powerful effects. For example, if one believes that people from one's own racial-ethnic group gain weight in middle age, one's own heavy future will feel inevitable, and, because effort to lose weight is assumed to be futile, individuals are less likely to expend effort to do so.

Once the in-group is a salient part of identity, then the other two dimensions of identity—being able to gauge how others may respond to the in-group and what in-group members are like—are more likely to shape individual behavior, perception, and motivation. Researchers differ in which of these dimensions they focus on, and individuals are likely to differ in the extent that each of these dimensions is a focus of identity (Cross, 1991; Jenkins, 1982; Sellers, Smith, Shelton, Rowley, & Chavous, 1998). When in-group membership is made situationally salient (e.g., being the only African American at a work conference), both similarity to the in-group (e.g., other African Americans) and the related meanings associated with that group identity will become prominent (Haslam, O'Brien, & Jetten, 2005; Sidanius, Van Laar, & Levin, 2004). Effects are also likely to be linked to salience of one's group in a location, profession, or social institution.

Because most research on racial-ethnic identity has focused on stigmatized groups, an important question is the extent that racial-ethnic identity predicts success across important life domains. Thus, researchers have asked about the relationship between content and structure of racial-ethnic identity and academic success in the adolescent and college years. Oyserman (in press) finds that effect of racial-ethnic identity depends on content. Simply feeling connected to in-group or being aware of racism are not sufficient to improve academic effort and outcomes; rather it is necessary to also believe that in-group members value and engage in effort to do well in school. With regard to engagement healthy lifestyle behaviors in the college years and beyond, Oyserman and colleagues (2007) find that when comparison between in-group and broader society is made salient, minority group members are less likely to believe in the efficacy of preventive health measures such as exercising as an adult if they believe that members of their group do not engage in them (or think that members of their in-group engage in risky health behaviors such as smoking cigarettes). Although research often focuses on a particular group, making sense of commonalities in impact of racial-ethnic identities across groups is beginning to be the focus of more research attention.

## FUTURE DIRECTIONS AND GAPS IN THE CURRENT LITERATURE

Literature on racial-ethnic identity has focused primarily on childhood, adolescence, and the early years of adulthood. Thus a major limitation of the research literature is the lack of attention to when and how racial-ethnic identity should matter beyond the college years. Although the previously described research gives some sense that racial-ethnic identity is likely to matter for engagement in health and health care, more needs to be done to conceptualize how racial-ethnic identity should matter to health and other aspects of adult life and to document effects over time and in real-world situations.

## IMPLICATIONS FOR POLICY

Research on racial-ethnic identity provides several implications for program development and public policy. First, this research suggests that programs and policies should highlight belongingness and connections between broader society and members of diverse racial-ethnic groups. That is, important social goals and values—including healthy lifestyle and civic engagement, education and career advancement, and effective strategies for obtaining these goals—should feel relevant to all racial-ethnic groups within a society. Second, to the extent that identities continue to be shaped over the lifespan, resources for engagement should be tailored across developmental phases. Globalization and international migration mean that societies across the world, including the United States, are becoming more diverse. Americans now reaching retirement face both the challenges of aging and the challenge of remaining engaged in an increasingly racially and ethnically diverse world.

**SEE ALSO** Volume 1: *Biracial Youth/Mixed Race Youth; Identity Development; Immigration, Childhood and Adolescence;* Volume 2: *Racism/Race Discrimination.*

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# F

## FAMILY PLANNING

**SEE** Volume 2: *Birth Control.*

## FAMILY AND HOUSEHOLD STRUCTURE, ADULTHOOD

Everyone has or at least had a family, and people live most of their lives in households, but the terms are complexly interrelated, in some ways very similar and in others very different. *Families* are people related by blood, marriage, or adoption; *households* are people who live together in a separate housing unit, defined by various criteria of use and privacy (and hence excluding group quarters such as hotels, college dormitories, and military barracks). Because so many close family relationships are contained within a single household, however, the two concepts are sometimes confused. Most households are still family households, that is, they include people who are related to each other, which reinforces their connection. Many other households, however, are nonfamily households, consisting of either one person or unrelated persons, such as roommates. Further, many family relationships transcend households, particularly those between generations (e.g., between parents and their adult children after they leave home). Hence these terms are related, although distinct, constructs.

### HOW CHANGING LIVING ARRANGEMENTS SHAPE FAMILIES AND HOUSEHOLDS

Both families and households changed rapidly, both in size and in composition, in the post–World War II (after 1945) period. In some ways, their changes are closely parallel. When parents have many children, households are large; when they have few children, households are small. This seems obvious, but it depends on a related concept, that of *living arrangements*. Changes in family and household size move together in response to changes in the numbers of children because in nearly every society, the vast majority of minor children live with their parents. A decline in birth rates immediately leads to smaller average household size. But for family relationships other than those of parents and young children, living arrangements can differ substantially, and hence, family changes can have very different effects on households. Further, as is discussed later, declines in fertility in the longer run have even stronger effects on reducing household size than does the immediate reduction in the number of children in households.

Consider a relatively recent change in living arrangements—the increase in independent living among unmarried persons. As recently as the period between 1940 and 1960, in the United States the increase in marriage rates among young adults meant that rates of household formation increased. By the 1970s, however, the increases in the divorce rates also meant that household formation increased. The conundrum is resolved by realizing that in the earlier period, the majority of unmarried adults (including the previously married) lived either with their parents, other relatives, or nonrelatives; by 1970 a

majority lived in independent households, often alone (Kobrin, 1976b, p. 237). Marriage was the usual route to residential independence in a separate household until 1970; since that time it has become normal for the unmarried to live independently.

Living arrangements, or who lives with whom, given the choice, are hence an important factor affecting the relationship between the numbers and structure of families and households. The rise of independent living among the unmarried has reduced household *extension* (another term that indicates whether a family household contains relatives other than a couple and their children) and increased the number of households. The people who used to live together in a single household are now spread across a greater number of households.

## WHY LIVING ARRANGEMENTS MATTER

Most research on the family pays relatively little attention to living arrangements. Studies of the likelihood of marriage are often vague about where the unmarried live before they marry or if they do not marry. Some researchers studying marriage patterns among women interpret their results as if the contrast were between getting married and remaining with parents (Michael & Tuma, 1985). By contrast, others interpret their findings to suggest that unmarried women are enjoying new opportunities of independent adulthood (Becker, 1991). Those studying men normally do not comment on alternative living arrangements to marriage at all (Hogan, 1981).

Similarly, studies of the consequences of widowhood rarely consider whether the widow(er) has remained independent or gone to live with relatives, normally children. The major change in living arrangements that has gained the attention of family scholars is more closely tied to central family processes: the rise in cohabitation. The question of whether or not it is a "family process" has received considerable attention. For example, is cohabitation an alternative to marriage with many marriage-like qualities, such as joint children? Or is it perhaps a prelude to marriage, a testing of compatibility? Or is it not a family process at all but only an economic arrangement to share living expenses, like roommates, but, as they say, "with benefits"? Or does it mean different things in different countries or at different stages of the life course (e.g., before and after divorce)? The jury is still out on this recent and dramatic change in the living arrangements of the unmarried.

Even beyond cohabitation, however, living arrangements matter a great deal. Clearly they are not the only factor shaping relationships, which can remain warm and supportive, sometimes even warmer, between those not living together. Also, as cohabiting couples normally discover, their lives change when they marry, even if they remain in the same home, because the institutionalization of marriage and the expectations of others, as well as their own expectations, reshape how they relate to each other. Nevertheless, living in the same household with another person has a major impact on any relationship, affecting as it does the sharing of space and tasks, gaining companionship, and losing privacy.

**Household Tasks** A historical perspective is important here, as not so long ago agriculture dominated most of the world's economies and the household was the center of economic production. Even in North America and the industrialized countries of western Europe, a majority of households were agricultural as recently as the beginning of the 20th century, and this state lasted even longer in the more recently industrialized countries of southern and eastern Europe, Asia, and Latin America. Married couples depended on each other's productive activities and no less on those of their children.

Although much work has left the household with the growth of the industrial and service economy, the need for other important activities persists. Even in the early 21st century, when fully independent adults decide to live together, whether for practical or romantic reasons, there are many productive activities that take place in households. Except for the very few households that can pay servants or fully outsource, there is food to be bought, prepared, and the results cleaned up; clothes to be washed and mended; and rooms to be straightened and cleaned or even sanitized, depending on the room. The benefits of shared finances still entail organizing bill-paying and account-monitoring, whereas the benefits of a shared social life still entail planning, gift-buying, and maintaining contact.

Further, the amount of work increases dramatically when the household includes dependents, such as small children or disabled adults. As noted earlier, no one questions that infants should live with parents or parent-like adults. Research on child development suggests that there are limits on the number of hours infant care that can be outsourced to institutions without there being at least some negative impact on the child (Belsky, 2001), with perhaps coresident or non-coresident nannies excepted. In addition, the demands of providing care for the elderly or disabled at home are also enormous.

Deciding who cooks, shops, does the dishes, and cleans is often a major problem for adults sharing a home, and the needs of dependent children and adults require deciding who does even more tasks. Living together does, indeed, matter. Some scholars, such as Thomas Burch and Beverly Mathews (1987), have suggested that all people would be happiest if they lived alone, coming together to share social events and occasional one-on-one time. What

motivates this approach to living arrangements is that even if all tasks (including meeting all dependents' needs) could be outsourced, there is still the matter of privacy, which for some, trumps companionship.

**Privacy and Companionship** Living with others undoubtedly reduces privacy. For those in a dependent position—adolescents vis-à-vis their parents, for example—living at home means that parents can monitor closely who their friends are, how they spend their time, and how they are feeling. This is much less of a problem for those in the less dependent position, in this case the parents, because the adolescent's knowledge of their behavior provides much less leverage (except perhaps for telling the neighbors about extreme or embarrassing behaviors or authorities about abuse); adolescents rarely have much power over their parents.

So the power differential matters. For such hierarchal relationships—whether for (near) adult children vis-à-vis their parents, the retired and perhaps disabled elderly vis-à-vis their employed midlife children, or even housewives vis-à-vis their provider husbands—having additional resources often allows the more dependent member to establish an independent residence, gaining privacy and autonomy. For the more powerful members, gains in resources simply allow them to continue to enjoy companionship and services with no loss of privacy and even more relative power. For trusting, equal relationships, however, the reduction in privacy linked with coresidence is much less of a problem. This is why many choose companionship, despite their having enough resources to live alone.

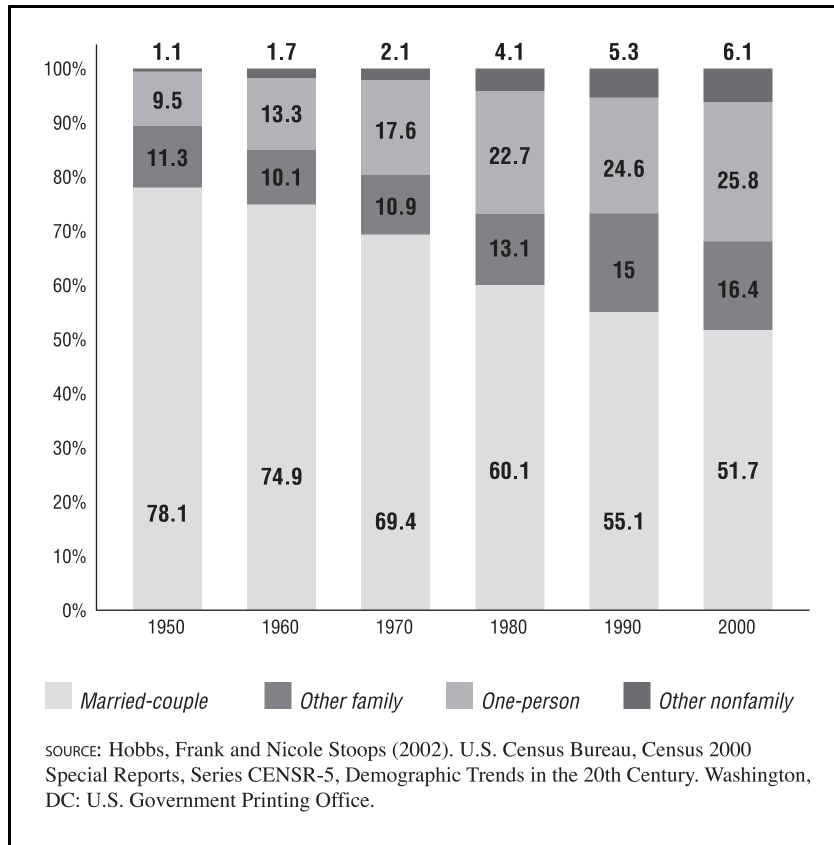
## HOW CHANGING DEMOGRAPHIC AVAILABILITY SHAPES FAMILIES AND HOUSEHOLDS

It is not always possible, however, to coreside with preferred others. An important consideration that limits who lives with whom is whether or not the person knows anyone who would be a compatible living partner. Some situations impair the formation of families, such as when there are too few young adults of a given gender relative to the numbers of their potential romantic partners. This normally occurs in situations of extensive sex-selective migration, such as when the movement of men to North America in the 19th century left many unmarried women behind, although the development of sex-selective abortion is also creating marriage market imbalances in societies with strong son preference, such as China. Large imbalances are rare, however, although even small imbalances are likely to have an effect. The marriage markets (or the pool of eligible potential spouses) for educated women, and particularly educated Black women, have narrowed (Tucker & Mitchell-Kernan, 1995).

Another change in availability, one that is the result of the demographic transition from high to low mortality and fertility, has had a more massive effect, this time on intergenerational living arrangements, sharply reducing household size. A major factor behind the increase in independent living arrangements among the unmarried—typically widowed—elderly is the result of a shift in the relative sizes of the generations: the number of children who are available for them to live with and the number of younger families who have elderly relatives available to live with them. This shift has confused analysts for a long time, particularly those studying family extension, and attaining a better understanding of it has come with difficulty (Kobrin, 1976a).

Declines in fertility and mortality, which on average have lengthened lives and reduced the number of children families have, have also reshaped generational relationships because of their effects on the relative sizes of the generations. When fertility was high, even though mortality was also high, populations were dominated by young people, both children and their relatively young parents, with few elderly. This meant that nearly all elderly persons could live with one of their children, but relatively few families would be extended by including a grandparent—there were simply too few elderly relatives to go around, and they did not live very long. In any cross-sectional count of families, very few would be extended.

Once fertility declined to approximately two children per couple, however, an increasing proportion of elderly began to have no children or grandchildren at all. Even among those who do have children, for all widows and widowers to live with a child would mean that as many as half of all families with children would experience family extension, and given the increase in longevity, this extension could last for many years. Scholars who studied trends in the proportion of families with elderly relatives living with them saw fairly stable, low levels of family extension (Laslett, 1972). Because they did not study those who did not live in families, they did not notice, as did those who studied living arrangements, that the proportion of widowed elderly living alone was skyrocketing and hence the proportion living with their adult children was falling rapidly. In the United States this revolution in the living arrangements of the elderly took place in the early 1940s. The elderly during this period had borne their children in an era of relatively high fertility in the last years of the 19th century and the early years of the 20th century. Later in the 20th century, however, the majority of elderly were the parents of relatively few children as a result of the fertility declines that followed (and even the baby boom of the 1950s did not produce large families, mostly just very young families). The ratio of middle-age to widowed elderly women (the daughter-mother ratio) had decreased sharply, from 2.7 in 1930 to 1.2 in 1973, with much slower declines




SOURCE: Hobbs, Frank and Nicole Stoops (2002). U.S. Census Bureau, Census 2000 Special Reports, Series CENSR-5, Demographic Trends in the 20th Century. Washington, DC: U.S. Government Printing Office.

***Figure 1.*** *Distribution of households by type, 1950-2000.* CENGAGE LEARNING, GALE.

before and since (Kobrin, 1976a). Similar rapid declines occurred in Europe (Wolf, 1995).

## ETHNICITY, FAMILIES, AND HOUSEHOLDS

A particularly interesting phenomenon in the decline in household and family size in the United States is that racial and ethnic minorities, and particularly African Americans, have contributed much less to the decline than Whites. There has been an ethnic crossover in household size and structure. Prior to the rapid overall decline in household size that began in the 1940s, Black families had been less likely to include extended family members, and young Black adults had left home younger (and married earlier) than otherwise comparable Whites. By about 1970, these differences had reversed (Goldscheider & Bures, 2003). The growth in living alone was much less marked among African Americans.

Finding answers as to why the growth was less marked is a major challenge for understanding ethnic differences in family and household change in the United States. The much later move out of agriculture (in the South) and the move into the high-rent inner cities, which matched economic opportunities only for a short while in the years immediately after World War II, has meant that young African American adults have experienced extraordinarily high rates of unemployment, so that living with other family members appears to provide a financial safety net for those who need it. However, given that poverty was at least as great in rural areas, a full understanding of these ethnic differences in living arrangement trends remains elusive. Some scholars argue that higher levels of coresidence among African Americans are due to stronger kin obligations and relationships among African Americans than among Whites, but this cultural explanation has not been fully tested and in any case does not explain why extended families were less common among African Americans prior to the racial crossover.

## CONSEQUENCES OF FAMILY AND HOUSEHOLD CHANGE

An additional focus of current concern about family change is the consequences for children of experiencing alternative parental structures, whether cohabiting parents, stepparents,

or single parents. This is an important concern; however, there are several other issues regarding living arrangements that are underresearched—these include the consequences for families of the strengthened privacy preferences that have emerged with the growth in nonfamily living as well as the consequences for the environment of the more rapid growth in the numbers of households, despite slowing population growth.

Scholars studying the growth in separate living arrangements tend to celebrate it, reflecting the idea that privacy is, in economists' terms, a *normal good* or one that is consumed more as income rises. Journalists write with horror of the growth in living with or returning to live with parents among young adults (Gross, 1991). The values of companionship, and of helping out family members in need, are much less celebrated. The assumption is that these will take care of themselves.

There is evidence, however, that this is not the case. People who had the experience of having a grandparent living with their childhood family were considerably more positive about the phenomenon, so that as this experience becomes rarer, the need for outsourcing care in old age may grow. Further, women (but not men) who lived independently of family in young adulthood were less supportive of providing housing room for young adults who were struggling economically (Goldscheider & Lawton, 1998), reducing young adults' opportunity to leave an inappropriate job or relationship by returning to their parents' home.

In another study, women who had lived independently in young adulthood were considerably less approving of traditional marriage (Goldscheider & Waite, 1991). This finding should put pressure on marriage-minded young men to become more egalitarian as well. However, the alternative of nonfamily living means that the pressures for change that emerge within a loving relationship are not brought to bear on gender relationships.

Hence, the growth in the need for privacy and the reduction in willingness to use the family as an economic safety net for semidependent adults (early and late in adulthood) means that the new phenomenon of nonfamily living may have become a very expensive innovation. It is proving expensive on another dimension, as well—its impact on the environment. Coresidence leads to economies of scale; more households means that more furniture and appliances must be produced and electrified and more public rooms (the shared kitchens, bathrooms, living rooms, and dining rooms) must be heated. These costs of separate living are not trivial. The fall in household size has important implications for both families and the global environment.

**SEE ALSO** Volume 2: *Cohabitation; Divorce and Separation; Dual Career Couples; Marriage; Remarriage;* Volume 3: *Demographic Transition Theories; Singlehood; Widowhood.*

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***Frances Goldscheider***

# FATHERHOOD

The term *fatherhood* can mean both fertility status (i.e., whether a man has biological or adopted children) and the "behavior and identity enacted by men who have children" (Pleck, 2007, p. 196). Joe Pleck suggested that the term *fathering* may be more accurate for describing the behavior and identity aspects of fatherhood.

## FERTILITY STATUS VERSUS BEHAVIOR AND IDENTITY

Fatherhood as indicated by fertility status is achieved through one's recognition of having fathered a child, that is, by establishing the paternity of a particular child with a specific female partner. Because paternity establishment sets in motion a number of significant obligations to the child and mother, such as paying child support when fathers do not reside with their children, social scientists have paid considerable attention to this aspect of fatherhood. In contrast, fatherhood defined as an identity and a set of behaviors can apply to men in various types of relationships with a child. Stepfathers, adoptive fathers, grandfathers, and uncles may assume fathering responsibilities for a child. These men sometimes are referred to as social fathers. The links between fatherhood as indicated by fertility status and fathering behavior are also of interest. For example, several studies in nations with low fertility rates have found an association between fathering behavior and fertility: Couples are more likely to have a second child when fathers are more involved in domestic tasks (Olàh, 2003; Ronsen, 2004).

## CHANGES IN DEFINITIONS OF FATHERHOOD

A long tradition of research has examined what it means to be a father (i.e., beyond procreation) in different times and places. Margaret Mead (1969) argued that fatherhood has always been a social construction, that is, what it means to be a father varies historically and culturally.

Historians have documented how definitions of fatherhood have changed over time in the United States (LaRossa, Jaret, Gadgil, & Wynn, 2000). During the colonial era in the United States, fathers were responsible for instructing children in basic literacy, craft skills, and religion (Mintz, 1998). Fathers also were responsible for children's moral upbringing and had almost complete authority to make decisions about children's marriages, occupations, discipline, and behavior. The emergence of the Industrial Revolution in the 19th century resulted in greater separation of work and family life. Fathering during that period increasingly was viewed as a breadwinning role. At the turn of the 20th century there was a cultural and normative shift toward viewing fathers as companions to their children (Griswold, 1993). The shift occurred partially because of increasing concern that sons raised primarily by their mothers were at risk of becoming overly feminized (Mintz, 1998). The latter part of the 20th century and the early 21st century witnessed a shift toward defining fathers as nurturers (Morman & Floyd, 2006). Fathers no longer were expected to be only providers and friends to their children; they also were expected to participate in all facets of childcare and child rearing.

In some cultures the role of the father has been assumed by several males. In traditional Dakota families, the role of the father was assumed by both the biological father and *tiyospaye* fathers (paternal uncles), whose role was to teach their *tiyospaye* sons (nephews) about a man's responsibilities to his family, tribe, and nation (White, Godfrey, & Moccasin, 2006). The biological father provided nurturance but never disciplined his children. Having more than one father is not uncommon in the modern era; children may relate on a regular basis to both a stepfather and a biological father. Although the role responsibilities of stepfathers and nonresident biological fathers are not clearly defined, these men often communicate with each other about their respective responsibilities to the child (Marsiglio, 2006).

Michael Lamb (2000) suggested that although the definition of fathering has changed over time, there is much more consensus in any historical period on what it means to be a mother than on what it means to be a father. In most societies the mother has assumed the primary caregiving role, and the definition of her role has remained fairly constant. Feminists argue that because most societies are patriarchal, men determine who assumes privileged roles such as provider and who assumes low-status roles such as caregiver. Others argue that social and economic forces have had a strong influence on expectations for fathers (Doherty, Kouneski, & Erickson, 1998). For example, in

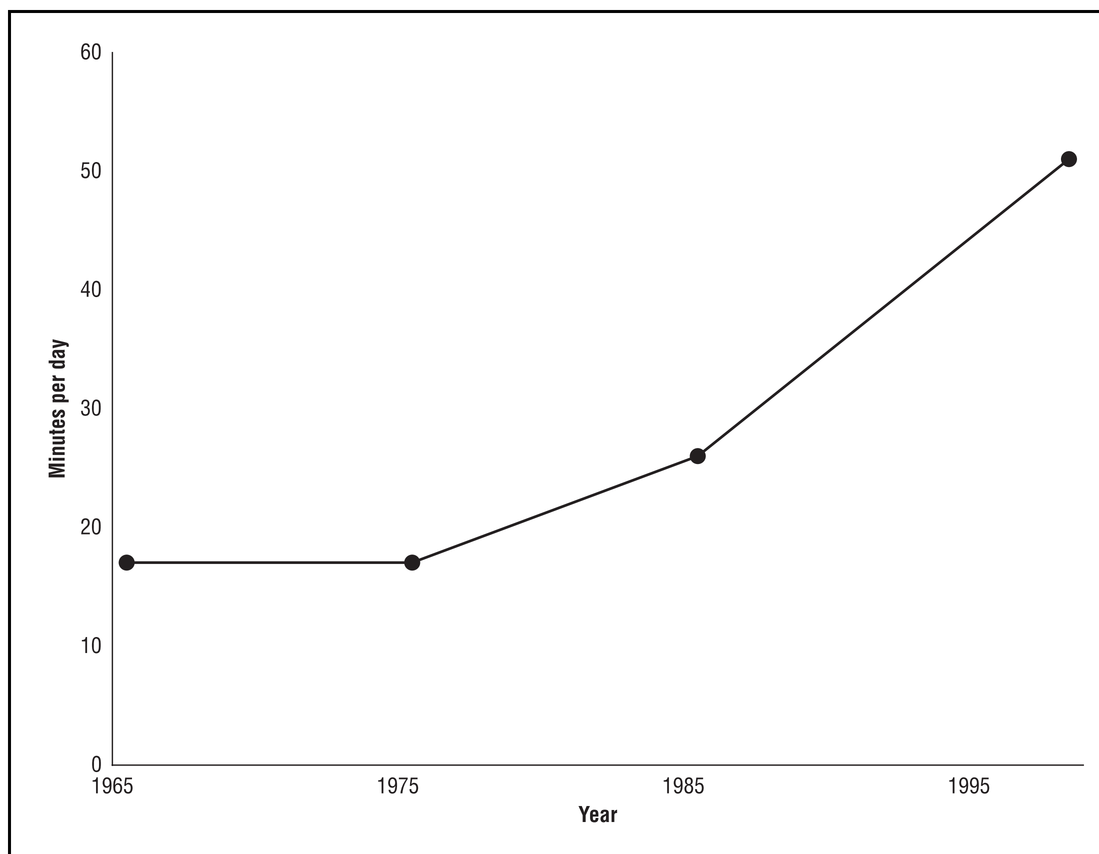


***Figure 1.*** *Married fathers' time spent on child care activities in U.S.* CENGAGE LEARNING, GALE.

the United States during most of the 20th century, fathers' economic responsibilities and military obligations often kept them on the outskirts of family life and minimally involved in the care of their children even though experts in child rearing encouraged fathers to become more involved in their children's daily lives (Neumann, 1926).

## TRENDS IN FATHERING

There has been considerable debate among researchers about how best to measure trends in fathering over time. One study (Lamb, Pleck, Charnov, & Levine, 1987) suggested that fathering behavior has three dimensions: (a) engagement, or fathers' shared interactions with their children; (b) accessibility, or a father's availability to a child whether or not he is directly engaged with that child; and (c) responsibility, or a father's organizing and planning activities in relation to a child and provision of resources to that child. These dimensions have been used in many cross-cultural studies. Although each of these dimensions of fathering is important throughout a child's development, fathers' engagement, accessibility, and responsibility vary within each developmental stage. For example, researchers have found that fathers' engagement with children increases between infancy and preschool. Trend studies most frequently examine levels of fathers' engagement with and accessibility to their children; few have focused on responsibility.

The research literature has documented a clear increase during the last three decades of the 20th century and the first decade of the 21st in the degree to which fathers who coreside with their children in the United States are actively involved with their children (see Figure 1). However, there has been considerable debate among researchers about the extent to which this change is meaningful. Findings from time diary studies reveal that between 1965 and 1998 married fathers engaged more frequently in childcare activities and spent more time in those activities each day (Sayer, Bianchi, & Robinson, 2004). About 40% of fathers reported providing childcare (including daily care, teaching, and play) on any specific day in 1965, whereas more than one half of fathers reported childcare activity in 1998. In addition, the amount of time married fathers spent in childcare activities increased from 17 minutes per day in 1965 to 51 minutes in 1998.

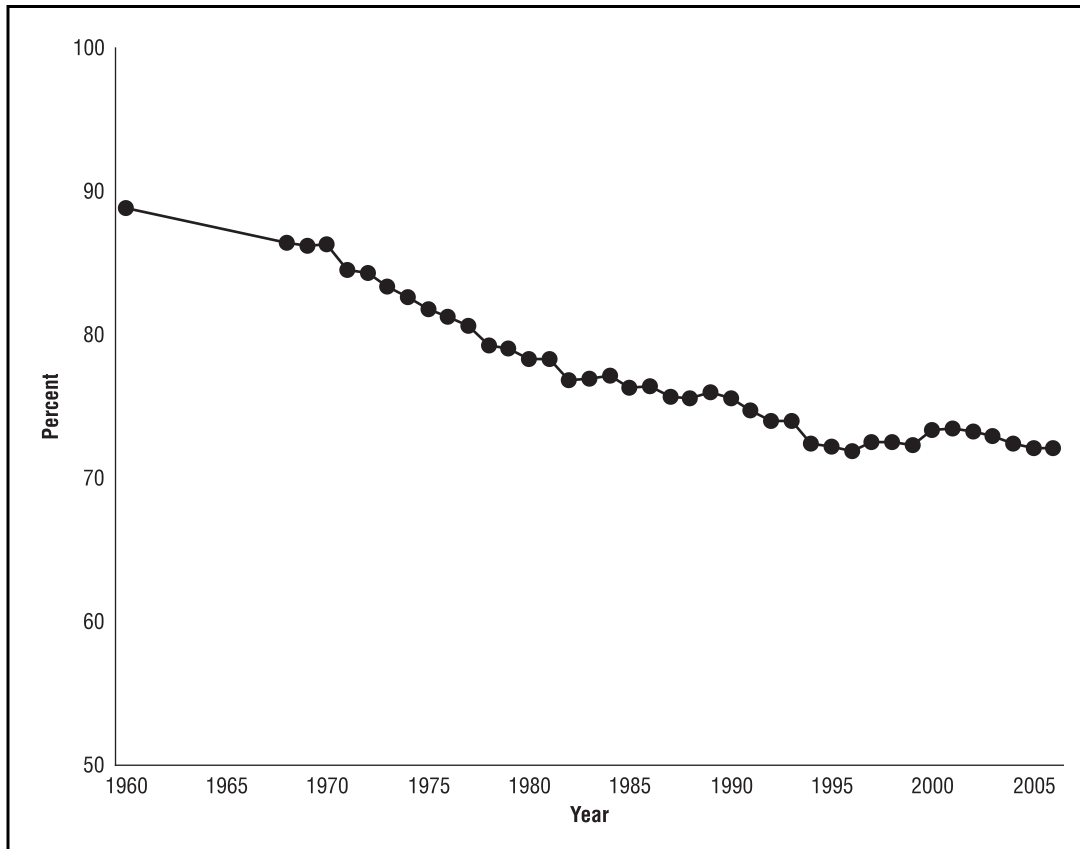


***Figure 2.*** *Children under 18 living with father in U.S.* CENGAGE LEARNING, GALE.

Several researchers have argued that the increase in fathers' involvement should be viewed within the context of mothers' time spent providing childcare to children, which also increased considerably in that period (Sayer, Bianchi, & Robinson, 2004). Married and cohabiting mothers who are employed full-time in the labor force spend about the same amount of time in direct childcare activity per day as did married and cohabiting mothers who were not in the labor force in the 1960s (Bianchi, Robinson, & Milkie, 2006, Gauthier, Smeeding, & Furstenberg, 2004). Annette Lareau (2003) suggested that a culture of concerted cultivation of children explains why parents maximize the time they spend with their children. In addition, critics of research documenting increasing levels of father involvement with children point out that the additional three quarters of an hour per day of childcare is trivial in light of the considerable increase in mothers' participation in the labor force during that period.

The increase in involvement with children has taken place primarily among residential fathers. However, during the same period the proportion of children who do not reside with their fathers has increased (see Figure 2). Approximately 72% of U.S. children under age 18 lived with their fathers in 2006, compared with 89% in 1960 (U.S. Census Bureau, 2006, 2008). Data from the 1999 National Survey of America's Families revealed that 34% of children living with single mothers who were not married at the time the child was born did not visit their nonresident fathers in the previous year (Koball & Principe, 2002). Taken together, the findings suggest an upward trend for residential fathers' involvement with their children and a downward trend for nonresidential fathers' involvement.

Various explanations have been provided for this phenomenon. Ralph LaRossa and colleagues (2000) suggested that cultural norms often change more quickly than does actual behavior. This suggests that there may be some unevenness in behavioral change, with some groups of fathers (residential fathers) showing evidence of increased involvement with their children and other groups of fathers (nonresidential fathers) showing no change or even less involvement. Other researchers have suggested that although the norms for father involvement have changed, situational factors often interfere with fathers' ability to stay involved with their children (Marsiglio, Roy, & Fox, 2005). For example, whether

## STAY AT HOME DADS

Although fathers constitute only a small proportion of primary caregiver parents in the United States (less than 1.5% in 2006), the number of fathers who cared for children at home for a full year while their spouses were in the labor force increased nearly two and a half times between 1995 and 2006—from 64,000 to 159,000 (U.S. Census Bureau, 2007). Primary caregiver fathers challenge traditional ideas about masculinity and gendered family roles. In a study of at-home fathers in Australia, Belgium, Sweden, and the United States, Laura Merla (in press) found that men dealt with their primary caregiving role by adapting traditional definitions of masculinity. Some fathers rejected the importance of paid work and integrated their childcare role into a masculine self-definition. Other fathers developed an alternative form of masculinity that incorporated a feminine side or rejected traditional masculinity in favor of "androgyny." Andrea Doucet (2004) found that many Canadian fathers who were primary caregivers retained close ties to paid work and contributed to the family income, reinforcing their masculinity. In addition to identity issues, at-home fathers face problems such as social isolation. Web sites and blogs attempt to link at-home fathers with one another.

the father ever resided with the child is an important influence on nonresidential father involvement. Fathers are likely to form bonds with their children when they reside in the same household. The father's bond to the child and the child's attachment to the father can have a strong influence on fathers' continued involvement with the child after the father leaves.

On the basis of findings suggesting that a father's residence with a child is critical for his active presence in the life of the child, researchers sometimes have concluded that parental marriage is better for father–child relationships than is cohabitation (i.e., unmarried residential arrangements). Although a substantial body of literature has documented that marital relationships are more stable than cohabiting relationships (Seltzer, 2000), researchers seldom have been able to isolate the effects of these relationship patterns on paternal involvement with children. However, a study using the Fragile Families and Child Well-Being data, a longitudinal study of a cohort of children born in large U.S. cities between 1998 and 2000 primarily to unmarried couples, examined father involvement among a subset of fathers who previously were married or cohabitating with the mother when the child was an infant but no longer were living together or romantically involved when the child was 3 years old (Laughlin, Farrie, & Fagan, 2008). Mothers reported that previously cohabiting fathers were more competent fathers and had more contact with their children after separation. Marriage may benefit families in some ways, but cohabitation may provide unique benefits that are not well understood.

### THEORETICAL APPROACHES

Four theoretical perspectives are important for understanding fathering: life course theory, developmental theory, the ecological perspective, and sociological theory. The life course perspective highlights individuals' trajectories of social roles and transitions and the implications of those trajectories for those individuals (Elder, 1998). In addition to acquiring a major social role with associated expectations and obligations, a man making the transition to fatherhood may experience life-altering changes in other areas of his life, including employment, his relationship with the child's partner, his own social behaviors, and his identity as a father. Depending on social and historical circumstances, these life transitions may be stressful or exciting and may lead to positive or negative changes that can set the father on a trajectory of more or less involved parenting (Elder, 1998). The life course perspective also suggests continuity over time in family relationships. For example, noncustodial fathers' commitment to their adolescent children was associated strongly with father–child relationships in early adulthood (Aquilino, 2006). The life course perspective also emphasizes the ways in which individuals' lives are linked to the lives of others, especially others within the family. Thus, events in a father's life such as losing a job reverberate in the life of his child and affect the child's well-being. In the same way, events in a child's life such as a critical illness affect the life of the child's father.

Central to the life course perspective is the concept of the timing of life events (Elder, 1998). Being involved early in the transition (at birth) gives a man the opportunity to develop a relationship with his unborn child, and that may strengthen his commitment and engagement over time (Cabrera, Fagan, & Farrie, in press). It is also important to consider timing in terms of the age at which a man becomes a father. Fathering a child during adolescence can have detrimental consequences for the father's life experiences, including lower educational attainment (Rhein et al., 1997), higher rates of drug use and engagement in illegal activities (Fagot, Pears, Capaldi, Crosby, & Leve, 1998), and more psychological problems (Vaz, Smolen, & Miller, 1983) compared with

the father's peers. Early fatherhood may have a negative effect on the social and emotional development of the child as adolescent fathers' exposure to these risk factors may lead to decreased involvement with their children over time (Farrie, Lee, & Fagan, 2008).

Developmental theory based on Erik Erikson's (1950) stages of psychosocial development has been used to understand fathering across the life course (Snarey, 1993). In Erikson's theory, a mature young adult is one who has a psychological and social need to nurture the next generation. Fathering is not seen simply as a social role defined by external forces; instead, generative fathering is considered a developmental process that requires continuous efforts to move toward mastery of parenting (Hawkins & Dollahite, 1997). Fathering is viewed as a process of growth and development within the man. The father's sense of well-being is closely tied to his involvement with his children in meeting their developmental needs. The value of the generative fathering framework is that it deemphasizes thinking about fathers as deficient and emphasizes fathers' potentials for growth.

The ecological systems perspective refers to the multiple influences on fathers' behavior and stresses the interrelatedness among those influences (Bronfenbrenner, 1986). A father's behavior is structured by his individual characteristics and his relationships with other members of his immediate social circle as well as by the larger structures (political, economic) in which individuals operate. However, rather than focusing on the interplay among these roles, most research has focused on fathers in relation to their close social relationships. For example, an increasing number of studies have shown the significance of the father–mother dyad relationship in relation to the father–child relationship (Doherty & Beaton, 2004). Recent studies also have addressed structural-level influences (the role of governmental and social policy). For example, research has shown that stricter child support enforcement policies in the United States have been associated with increased father involvement with children in the households of never-married mothers (Huang, 2006). An important contribution of the ecological systems perspective is the finding that fathering appears to be more sensitive to environmental influences (e.g., marital stress) than is mothering (Doherty, Kouneski, & Erickson, 1998).

Sociological theory focuses on fathers' personal and interpersonal resources. A person's set of skills and knowledge, such as educational attainment, personality traits, work habits, and occupational skills, is referred to as human capital (Coleman, 1990). Fathers who have made investments in their personal success have a positive influence on their children's outcomes. Studies have shown that fathers' educational achievement is significantly correlated with children's academic success (Amato, 1998). Social capital theory suggests that the resources that are generated as a result of relationships between people can affect a father's influence on his children (Amato, 1998). Fathers who have a diverse set of friends and acquaintances can expose their children to a wide variety of experiences and perhaps garner resources to aid in their development. Social capital studies have revealed more positive child outcomes when fathers are more engaged with their children and when the quality of their interactions with their children is high (Marsiglio, Amato, Day, & Lamb, 2000).

## FUTURE DIRECTIONS FOR RESEARCH

Early studies of fathers' influences on children made some of the same mistakes that were made in research on mothers' influences on children: The mother–child or father–child relationship was examined without regard for the impact of the other parent or the larger family and social context. Recent studies have begun to address this oversight by including both mothers and fathers (Davidov & Grusec, 2006). The potential for researchers to examine child outcomes within the context of the entire family and the larger social context has increased with the availability of large longitudinal data sets such as the Early Childhood Longitudinal Study: Birth Cohort and the Early Head Start Research and Evaluation Project: Fathers' Study (Cabrera et al., 2004).

Little research has examined fathering across the life course. Few studies have addressed the effects of having children on men from the time when they become fathers though older adulthood. Research on men tends to examine their development in the context of work, relationships, communities, and families (Levinson, 1986) but seldom in relation to fathering; an exception is the work of Rob Palkovitz (2002). For example, there has been little research on how men's development is affected by raising children during adolescence, which can be a difficult time for many parents. Also, little is known about the development of men who do not reside with their children. A fruitful area for research would be the development of men in different types of relationships with their children.

Finally, few studies have examined the ways in which social policies affect fathers' relationships with their children. Fathering-related policies in the United States have focused on low-income nonresidential fathers. The 1996 Personal Responsibility and Work Opportunity Act, which requires parents (mostly mothers) receiving public assistance to be gainfully employed within 2 years after first receiving assistance, specified as one of its major objectives increasing children's access to both parents. The Act allows states to use federal money to develop programs that increase the employability of fathers. One assumption guiding this policy is that low-income

***Fathers Taking Leave.*** *Tim Waddill changes Chase, his newborn twin son's diaper, left, as Stephanie Waddill, back, gives a bottle to their other twin boy, Connor, at their home in Irving, TX.* AP IMAGES.

nonresidential fathers who are more employable are likely to provide financial support to their children, stay involved in their children's lives, and lift their children out of poverty. Research is needed to examine the influence of this policy initiative on fathers and children.

**SEE ALSO** Volume 1: *Parenting Style; Socialization, Gender; Transition to Parenthood;* Volume 2: *Motherhood; Noncustodial Parents; Roles.*

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# FLEXIBLE WORK ARRANGEMENTS

The term *flexible work arrangements* describes a number of alternative work options (including flextime and telecommuting) that allow work to be done at times and in places outside the standard workday. These arrangements

are especially important to workers at different stages in the life course, particularly dual-career couples and single working parents with young children. The related term *flexibility*, however, also characterizes the wide range of employment arrangements that exist outside the standard full-time, continuous-employment contract. These arrangements include temporary, contingent, seasonal, and contracting work. Unlike the first type of flexibility, these arrangements benefit not so much employees as the needs of employers to cut labor and benefit costs.

Although it is doubtful that the majority of workers in industrial economies such as the United States ever worked the so-called standard full-time workday, there is evidence that even fewer did so in the period from the early 1980s into the first years of the 21st century. ''Flexibility'' has been called the slogan of the emerging postindustrial economy and associated life cycle. Flexible work arrangements are contrasted with the ''rigid'' work arrangements of industrial economies (e.g., assembly line manufacturing, or clerical office work) and with ''linear'' life-cycle stages—that is, the assumption of lockstep progression through school, work, and retirement. In the new, flexible arrangements individuals may experience all three of these stages simultaneously.

Rigid work arrangements were best suited to the mass production of consumer goods where markets for the goods and for the workers producing them remained relatively stable from year to year, such as the U.S. auto and home appliance industries of the 1950s and 1960s. Such stability led firms to hire workers on a semipermanent basis, thus allowing within-firm career mobility paths and generous health and retirement benefits for workers. In contrast, the postindustrial economy is based on providing rapidly changing consumer services within globally competitive markets with a demographically diverse workforce. Increasing the flexibility of work arrangements, including legal definitions of who is eligible for work, is argued to be better suited for this new system by advocates for both employees and employers, although the two sides emphasize different forms of flexibility.

Employee preferences for more flexible work arrangements are strongly related to one's stage in the life course. The increasing presence of married women, especially those with young children, in the labor force has led many employers to initiate family-friendly work-flexible programs, such as flextime, compressed workweeks, reduced hours, and telecommuting, in order to attract and retain highly skilled and valued workers, especially professional women. Working mothers with young children also are the demographic group that is most likely to prefer nonstandard weekday shifts (e.g., evenings, nights, weekends), for personal and family reasons, such as childcare. The combination of workers retiring at younger ages but living longer has increased preferences among retirement-age workers for jobs that allow them to reenter or continue in the labor force, often on a less than full-time basis.

Some firms have addressed these preferences by allowing workers to ''phase down'' to retirement by reducing their job duties and responsibilities before retirement. Older workers without such arrangements often take new jobs at or after retirement, such as greeters at retail stores. These jobs bridge the financial gap between career and complete retirement. Also, as flatter, less hierarchical organizational structures have reduced traditional ''intra-firm'' (internal labor market) career paths, many younger, Generation X workers, especially those with highly sought-after professional or technical skills, have developed preferences for inter-firm or ''portfolio'' careers as self-employed independent contractors who sell their skills to firms for a set period of time or for a particular product. Flexibility is considered a characteristic of a ''good'' job, when it is sought out as a way for employees to meet their personal and family needs.

The origins of employer preferences for flexible work arrangements are quite different. Although some employers have embraced programs such as flextime and phased retirement to respond to employee preferences, the primary employer motivation for initiating work flexibility has been to better cope with rapidly changing technological changes and consumer preferences that characterize many new product and service markets, such as the computer software and hardware markets. Many firms also seek flexible staffing to cope with the profit squeeze created by increased foreign competition and rising costs of employee health care and pension benefits. In such cases, the flexibility stems from how employers staff jobs, rather than when and where the work is done. Thus, many employers have developed flexible strategies that externalize employee contracts and benefits via the use of temporary agencies or by hiring independent contractors. Other employers have replaced their employees with part-time or contingent workers (or redefined them so), and such workers have no psychological or legal expectations for continued employment.

These trends have been aided by the decline in union membership and influence, which has enabled employers to undo the collectively bargained fixed work rules and defined benefits that were common in industrial production. More flexible staffing arrangements are also consistent with new managerial theories and practices that cut costs by eliminating middle-management positions and thus ''flatten'' organizational hierarchies. In turn, these changes have reduced intra-firm job mobility while making employees more responsible for their own training and career, using the disincentive of job insecurity. In this context, flexibility is associated with bad jobs.

## SHIFT WORK

The most common alternate, if not flexible, work arrangement involves the wide variety of times when workers do their jobs. A worker's job shift defines both the number of hours worked in a week and which hours and days are worked. In the United States, the standard shift is considered to be a fixed daytime, 35 to 40 hours per week, 5 days per week, Monday through Friday schedule. However, according to data from the 1997 Current Population Survey (CPS) of the U.S. Census Bureau and the Bureau of Labor Statistics, by the end of the 20th century fewer than half of adult workers (43%) worked the standard 35 to 40 hours per week. Another 25% worked more than 40 hours, and 22% worked part-time—that is, fewer than 35 hours per week. In addition, in terms of which hours and days one worked, only 3 in 10 adult U.S. workers were employed on the standard weekday shift. Nonstandard shifts include evenings, nights, rotating shifts, being on call, compressed hours, weekends, and multiple combinations of different days and times, including flexible work schedules. The most common nonstandard arrangement was weekend work; 23% of all workers worked at least one weekend day. Weekend work was slightly more common among part-time workers (24%) and was especially common among those working more than 40 hours (30.5%). The most common nonstandard hourly shift was fixed evenings, worked by 6% of all full-time workers and 14% of part-timers.

Men were somewhat more likely than women to work both nonstandard hours (21.1% vs. 18.6%) and nonstandard days (40.3% vs. 38.9%, respectively). Men were more likely to work fixed nights (between midnight and 8 a.m.), weekends, and on rotating shifts in which the shift times change periodically. By contrast, women were more likely to work fewer than 5 days per week because of the higher percentage of women working part-time (30% to 14%). African Americans and Hispanics were more likely than Whites to work nonstandard shifts, whereas increasing age and years of education reduced the likelihood of doing so. Married workers with a coresidential spouse were less likely to work nonstandard shifts than workers in other marital categories. Having school-age or younger children also reduced the likelihood of women, but not men, working nonstandard shifts.

Work shifts, however, are primarily determined by the occupation and industry in which one works. Those working in retail sales and personal services were most likely to work nonstandard shifts, especially waiters/waitresses, cashiers, and supervisors and proprietors in these industries. Well over half of workers in these categories worked nonstandard hours and especially nonstandard days. For example, a full 84% of male waiters and 76% of female waitresses worked weekends. Just 10 specific occupations accounted for one-third of all nonstandard workers, and 8 of the 10 were jobs in the retail and personal services. The other 2 occupations were truck drivers and nurses. Professional and administrative support workers were least likely to work nonstandard shifts (especially hours), particularly if they were government employees.

Most workers—two-thirds of male and half of female employees—cited job requirements as the reason why they held nonstandard shifts. Family considerations and day-care arrangements were also a chief concern among mothers (but not fathers) of preschool-age children. Thus, at least for one sizable segment of the workforce, shift work may be used as a strategy for balancing work and family demands. Likewise, three-fourths of part-time workers kept their reduced hours voluntarily, although an increasing number reported working part-time because they had been unable to find full-time work. For most other workers, shifts appear more fixed than flexible.

Since the 1970s most research on shift work has centered its effects on the well-being of workers and their families. In this area, there is one key question: Is nonstandard work a strategy for balancing work–family demands or a cause of work–family conflict and instability? This question is particularly salient when attempting to understand the work choices of the current cohorts of adults, given the increases in women's labor force participation and the overall number of hours worked by Americans at their jobs. Given these shifts, workers have far less time available for family and leisure activities. The evidence is mixed but does suggest that working nonstandard shifts—especially rotating and weekends—reduces interaction among spouses and their children and interferes with family obligations.

An even longer standing concern, dating back at least to the 1950s, is the health effects of nonstandard shifts. Working nonstandard hours, especially nights and rotating shifts, is thought to create physiological and psychological adjustment problems by disrupting human circadian rhythms and sleeping and eating patterns. As a result, some research shows that workers of nonstandard schedules have elevated risks for cardiovascular and coronary problems, diabetes, gastrointestinal and digestive problems, on-the-job injuries, depression, and alcoholism. The overall results, however, are mixed and inconclusive.

Research is also inconclusive with respect to the prevalence of nonstandard shifts. Although the assumption is that the growth of service industries and the globalization of markets has created a 24/7 economy

***Working at Home.*** *Technology has made it easier for parents to balance time between home and work.* © STEFANIE GREWEL/ZEFA/CORBIS.

necessitating round-the-clock operations, there is no direct evidence that nonstandard shifts are more common in the early 21st century than they were during the 1950s or 1960s. The exception is the expansion of part-time work, which increased from 13% of the workforce in the 1950s to 22% in 1997. Data limitations have prevented the systematic study of nonstandard work over recent decades. Although the CPS has periodically included supplements with questions on work schedules since 1973, the survey questions on specific work hours are not asked consistently. Questions regarding specific workdays were not introduced until 1991. The assumption of increased nonstandard schedules rests primarily on the relative growth rates of jobs with high rates of nonstandard workers and demographic projections for continued rapid growth, such as nursing, food preparation and serving, retail sales security guards, and waitresses/waiters.

## FLEXTIME

Flextime is a type of work schedule that allows employees to vary the times they work on a periodic basis, by starting and ending the workday early or late, or by compressing weekly work hours into fewer days (e.g., working 10 hours per day for 4 days). Flextime may be a formal company policy establishing the limits of flexibility. For instance, workers may have the option of starting work within the 2-hour window of 7 to 9 a.m. and ending the workday between 4 and 6 p.m., provided they put in a full day of work. By contrast, flexible hours may be an informal attribute of a job, such as with college professors, who often choose their own work hours. In both formal and informal flextime there are likely to be core times in which employees must be at their jobs.

Since the early 1990s employers have increasingly adopted flextime policies. According to a 2001 survey, 59% of employers offered flextime to some or all of their employees, an increase of 21% since the early 1990s. In a separate 2001 survey of employees, however, only 29% reported working on flexible schedules. This disparity between employer-reported availability and actual use points to the major issue in the flextime literature: the mismatch between its availability and its use. Many workers who have access to flextime may not need it,

such as older workers who are not caring for young children or elderly parents. Other workers who could use flextime often do not take it because of informal employer or coworker pressures not to, or because they fear it will negatively affect their career advancement by signaling that family obligations are more important than work obligations, as in the case of the "mommy track."

Surveys of employee preferences have consistently found that working a flexible schedule is a highly desired job characteristic, primarily because it helps balance work and family demands. Out of all working parents, 80% regarded it as an important and sought-after job attribute; 80% of those who lacked access to flextime desired it; 25% said they were considering changing jobs or employers in order to work on a more flexible schedule, even if it would reduce their opportunities for career advancement. Conversely, working inflexible schedules is second only to number of hours worked as a reason for not spending more time with family.

Employers also see the benefits of flextime in reducing job stress, employee turnover, absenteeism, and tardiness while increasing satisfaction and morale, as well as the ultimate benefits of recruiting and retaining highly skilled workers, thus improving organizational performance. Nevertheless, although some evidence shows that flextime improves employee morale and reduces absenteeism, there is no consistent evidence that it increases employee productivity or organizational performance. Moreover, flextime may be of limited practical use to employers because, unlike many job benefits such as health insurance or pensions, it is best suited to the idiosyncratic needs of particular individual workers, regardless of job, such as mothers of young children or those caring for elderly parents, rather than all workers in particular jobs, such as all female lawyers.

The result, as pointed out above, is underutilization of flextime and a mismatch between those who would benefit most and those who have access and use it. As with job shifts in general, flextime is characteristic of the job and not of the demographic characteristics of workers. Although women and African American workers express the strongest desire for flextime, those with greatest access include males, especially married males with children; college-educated, professional, managerial, and sales workers; workers in private household and agricultural occupations; and both those working more than 40 hours per week and those working fewer than 40 hours. Actual use of flextime is greatest among married, high-income, professional, managerial, and sales workers. Age, race, and having school-age children, however, did not increase use of flextime, even when available. Finally, and perhaps because of the disparity between preferences for flextime and who has access to and uses flextime, the evidence is only mixed as to whether these work arrangements actually help workers balance work and family demands.

## HOME-BASED WORK AND TELECOMMUTING

Working at home is not a new work arrangement; indeed, it dates back to the old "putting out" or "cottage" system of the late Middle Ages (and much farther back if one considers agrarian economies). What is new and potentially flexible is the form known as telecommuting. This is an arrangement that allows workers to do work from home or other locations away from the normal work site. Advances in technology, such as computers, fax machines, and cell phones, facilitate communications between off-site workers and a central office, or a "virtual office" in the extreme case in which there is no longer a physical central office.

The term *telecommuting* was introduced and first used by firms in 1970s as a way to make them less vulnerable to fuel shortages during the oil embargo imposed by the Organization of Petroleum Exporting Countries (OPEC). Estimates of the number of workers who telecommute in the United States vary greatly, as such estimates depend on the frequency with which an employee works from home. By the early 1990s it was estimated that between 3% and 8% of workers worked from home at least 1 day per week. The raw number of telecommuters had increased from 1 million in the mid-1970s to more than 8 million by the early 1990s and has continued to grow by roughly 20% per year. In 2000 the U.S. Department of Labor estimated that between 13% and 19% of U.S. workers telecommuted on a regular basis.

As with flextime, the benefits of telecommuting for workers are thought to include increased control over job schedules, which helps balance work–family demands. Telecommuting also reduces commute-related stress and time and saves on fuel and other transportation costs. In addition, telecommuting allows the employer to cut costs related to office space and energy use. Also, because employees no longer have to live within physical commuting distance, companies may hire from a wider pool of potential talent. Society also benefits through reduction of air pollution, fuel use, and traffic congestion.

Telecommuting, however, also has potentially serious drawbacks. For the telecommuter, there is the isolation from coworkers and professional networks and the loss of both a social support system and career contacts and mentors. Working from home also may increase family demands, particularly if one has young children, or other competing family obligations. It can also increase work demands. The technology that facilitates

telecommuting also can make the worker "available" to the employer 24/7. For employers, the major drawback is the challenge telecommuting poses for monitoring the work of off-site employees. This is an important issue for employers, especially in the absence of definitive data comparing the productivity of telecommuters with that of on-site workers.

The characteristics of workers who telecommute are generally similar to those who have access to flextime. College-educated, professional, managerial, and sales workers and, to a lesser degree, private household workers were more likely to telecommute, as were married workers, especially if they had a spouse at home. Unlike with flextime, however, women were more likely to telecommute than men, as were both mothers and fathers of preschool children. Working long hours, especially more than 50 per week, substantially increased the likelihood of telecommuting. Such trend data are difficult to interpret, however. It is unclear whether those who work long hours use telecommuting as a strategy for balancing work and family demands or at least meeting work demands, or whether the telecommuting technology makes them available to work longer hours. Telecommuting is also strongly related to working a flexible schedule, particularly having the ability to adjust one's schedule on a daily basis.

## FLEXIBLE EMPLOYMENT STAFFING ARRANGEMENTS

Flexible employment relations, also commonly referred to as nonstandard, alternative, or market-mediated work arrangements, consist of temporary, contingent, seasonal, and contract (consulting) work. These diverse categories share one common factor: Employees are not continuous employees for the firm for which their work is done. For the most part, these arrangements are structured by the preferences of employers and not employees.

**Temporary, Contingent, and Seasonal Employment** In contrast with part-time employment, which may be regular, long-term employment, temporary, contingent, and seasonal employment is by definition short-term employment. Most temporary employment arrangements involve externalization of responsibility and control of labor through third-party temporary help agencies. Although they have been around since the 1920s, it was only after 1972 that employment through these agencies experienced rapid growth, at more than 11% per year, from 0.3% of the U.S. workforce in 1972 to 2.5% by the late 1990s. Since the mid-1990s, however, the growth rate has slowed considerably. The primary impetus for growth appeared to come from employer strategies of meeting cyclical changes in staffing needs; hiring through temporary employment agencies allows firms to add or reduce staff on an as-needed basis. Firms also use temporary agencies to lessen their recruitment and training costs and to externalize employee benefits, which are provided by the agency.

Temporary help agency employees are more likely to be women, Black or Hispanic, and under the age of 35. They are most likely to be hired for work in manufacturing and service industries and in administrative support and labor occupations. Of all temporary employees, 60% are involuntary in that they prefer permanent employment with a firm but have been unable to secure such employment. Some employees use temporary agencies to acquire job skills and experience in order to find permanent employment. Data are mixed as to how successful they are able to do so. One study using national CPS data found that 52% of temporary workers had changed employers 1 year later; the data do not reveal, however, whether they had found permanent employment or changed agencies. Temporary workers are paid an average of one-third less than regular employees; however, temporary engineers and technicians often earn more than their counterparts in regular jobs. Even among higher paid temps, fringe benefits are fewer and more limited than those of regular workers.

The Bureau of Labor Statistics defines contingent employment arrangements, including seasonal and on-call employment, as those having no implicit (or explicit) long-term contract. They involve fixed-term contracts or no contracts at all. Unlike temporary workers who are employed by third-party help agencies, most contingent workers are hired and paid directly by the firm for which they will do the work. Based on these characteristics, in 2001 about 5% of the U.S. workforce was contingent. Almost 40% of U.S establishments use contingent workers, most commonly in industries with low-cost production strategies. The most common reason for hiring contingent workers is to meet seasonal demands, such as retail workers during holiday seasons, summer workers in tourism, or farm workers during harvests. Seasonal farm laborers make up 42% of all contingent workers. Contingent workers also help employers with special projects and unexpected increases in demand and fill in for regular workers who are absent. Although there is a lack of good data on overall trends in contingent employment, a decline in nonfarm contingent workers during the late 1990s appeared to be related to the expansion of the U.S. economy and a tightening of the labor market. The need for seasonal farm labor, in contrast, has remained stable.

**Contracting and Consulting Work** Contracting or consulting workers may be employed by a firm or they may be self-employed. Contracting firms operate like temporary

help agencies except much of the work done for clients may be done off-site, in which case it is labeled "subcontracting." Since the 1980s the use of contract firms has spread throughout U.S. industries, from business consulting firms to data processing to janitorial services, as more firms have sought to externalize labor and production costs by outsourcing these activities.

Contracting may also be done by independent, self-employed workers. Unlike employees, whose work and compensation is defined by the amount of labor expended, independent contractors are generally given specifications for a final product and they decide how best to accomplish it. Thus, independent contractors enjoy greater autonomy over their work, but they bear the economic risk of their employment, while providing their own benefits and being solely responsible for paying Social Security and unemployment compensation taxes. Moreover, many independent contractors are really not that "independent" because much of their work comes from one firm rather than from many.

There are no definitive data on the number of independent contractors in the United States, but according to 1997 CPS data, 7% of workers self-identified as such. Another 5% to 6% of workers identified themselves as self-employed but not as independent contractors. Despite the lack of objective data on employment trends for independent contracting, researchers assume that this type of employment substantially increased since the 1970s because of changes in the U.S. tax code that facilitated and even required some categories of workers, such as real estate agents, to become independent contractors. It has also been assumed that many younger professional and technical workers have been drawn to independent contracting because of the promise of greater flexibility of these work-project-oriented arrangements and portfolio or "boundaryless" careers, especially during a period in which traditional intra-firm career paths were disappearing.

The evidence is mixed, however, as to whether independent contracting is more beneficial than regular employment. Most independent contractors prefer this type of arrangement to traditional employment. Many earn higher wages than comparable workers in traditional employment arrangements. This has been especially true in many professional and technical occupations, particularly during the economic boom and tight labor market of the late 1990s, as epitomized by the software industry in Silicon Valley. Yet, an important disadvantage is that independent contractors are less likely to be covered by health insurance and pensions.

## DIRECTIONS FOR FUTURE RESEARCH

Given the great variety of work arrangements that are defined as flexible, each with its own research gaps and needs, it is difficult to summarize overall suggestions for future research. Nevertheless, researchers are in agreement about the following needs. First, future research would benefit from greater clarification and agreement on terminology with respect to terms such as *flexible*, *alternative*, *nonstandard*, *contingent*, *temporary*, and *contract* work. As noted above, not all alternative or nonstandard arrangements are flexible; examples include shift work or temporary work. Likewise, researchers must clarify how much schedule flexibility constitutes flextime and how much off-site work constitutes telecommuting and, more importantly, who makes the decisions as to where and when to work: Is this a choice of employers or employees? Are flextime and telecommuting considered flexible work arrangements if they occur within strict employer-defined limits? What makes these arrangements flexible is the control employees have over where and when they work.

Second, researchers agree that, once defined, more valid and reliable measures of these work arrangements are needed. Researchers need to go beyond measures that are based on self-identification, as in CPS measures of shift work or independent contracting, yet the measures must still be amenable to survey research. Likewise, because flexible work arrangements are organizational as well as individual, better measures of the organizational characteristics that are associated with both "good" and "bad" flexibility are needed. Such organizational attributes may include departmentalization, formalization, authority structure, and the presence of work teams.

In terms of outcomes, more research is needed that examines the effects of flexible work on the physical and emotional well-being of workers and their families. Outcomes could be expanded to include the distribution of household labor and other responsibilities among dual-earner couples. Research along these lines is most developed in studies of shift work and flextime, but even here more valid and reliable outcome measures are needed.

Other research needs to look at the long-term effects of flexible work arrangements on workers' careers and retirement. Do flexible arrangements hinder upward mobility by creating more interruptions in workers' job histories? What are the implications for postretirement well-being and pension eligibility if workers continually change employers and their employment status? This is an especially critical question in an era of increasing individual responsibility for pensions, as in 401(k) plans.

## POLICY IMPLICATIONS

The major policy implications of flexible work arrangements involve labor, health, pension, and family policies. Current U.S. labor laws were crafted during the early

1930s and 1940s and continue to be premised on standard employment arrangements. Thus, workers in flexible arrangements are less likely to have protections provided by various federal occupational safety and antidiscrimination laws. They are also less likely to be covered by employer-provided medical and pension plans. Indeed, the growth of many forms of flexible work arrangements have been spurred by employer efforts at reducing the regulatory and benefit costs of these programs. Thus, many scholars have argued for the development or expansion of benefit programs that are not funded primarily through employer contributions. These would include universal health care and expansion of Social Security eligibility and credits to cover all workers regardless of changes in employer and employment status.

Rapidly increasing health care and pension costs have also limited employers' offerings of family-friendly benefits, particularly paid maternity leave and on-site day care. As employers cut these benefits, it is likely that employee preferences for less costly alternatives such as flextime and telecommuting will grow. Other pressures that could lead to expansion of these flexible arrangements are an aging population and the increasing need for elder care and increasing energy costs and environmental concerns. As these pressures build, scholars need to develop data strategies that answer employers' concerns about the effect of flexible job arrangements on worker productivity and firm profitability. Policy makers need to develop programs that better target flexible work arrangements to work with families and those relatively deprived of flexibility, such as lower income single mothers, African Americans, and those working standard fixed shifts, especially night and rotating shifts. Likewise, they will need to develop alternatives to meet the needs of workers in jobs such as public safety that are not amenable to flexible scheduling or work-site arrangements.

All evidence suggests that both "good" and "bad" flexible work arrangements will become even more common in the future, whereas workers with standard, full-time arrangements will become an even smaller minority. However, because many social benefits such as health insurance, pension funds, and unemployment compensation are tied to full-time status and the number of years worked for the same employer, the growth of work flexibility could create serious problems for the well-being of workers, especially in later life. One general solution is to "decouple" benefit eligibility from employment status and tie it to more universal characteristics, such as citizenship.

At the same time, employers offering benefits such as flextime or telecommuting to one worker in a particular job category are generally required to offer it to all in that category. However, because the use of these benefits is based on individual, nonwork needs, employers are reluctant to provide them, especially in the absence of data on how these benefits will affect their bottom line. This suggests a solution opposite to the more universal provision of health care and pension benefits: that certain flexible benefits be targeted to individual workers based on their personal, nonwork needs. Beyond this difference, however, future policies that address both more universal and more personalized benefits need to take into consideration how workers' progressions through their life courses affect their needs for different types of benefits and different types of flexible work arrangements.

**SEE ALSO** Volume 2: *Employment, Adulthood; Job Characteristics and Job Stress; Occupations; Policy, Employment; Work-Family Conflict.*

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***Rudy Fenwick***

# FRIENDSHIP, ADULTHOOD

Friendship is one of the few relationships that can begin in childhood and endure for the entire life course. It is also a uniquely voluntary relationship that is influenced by choice more than by ties such as kinship. Nevertheless, social statuses and contexts determine the set of acquaintances from which people choose friends, and so the pool of potential friends usually is constrained by factors such as age, gender, race and ethnicity, social class, geographic location, and personal interests. Like other close relationships, a friendship may change over time, reflecting the developmental characteristics of the friend pair as well as their lifestyle choices. Friendships are subject to the joys and frustrations inherent in any strong emotional bond.

## DEFINITION AND FUNCTIONS OF ADULT FRIENDSHIP

Adults typically define friends as persons with whom one is intimate and caring, whose company one enjoys, and whom one can trust. Friends are people whom one can depend on, who accept one as is, and who share similar interests. Most friends are similar to each other in characteristics such as age, sex, race, and class.

The definition of friendship is tied closely to the purposes friendship serves in adult life. Friends are valued for companionship, practical assistance, and advice. They provide emotional support, affirm one's worth as a social being, serve as role models, and make life interesting. Friends who share a long and meaningful history help sustain one another's self-identity and provide opportunities for pleasant reminiscing. Some people purposely seek out friends who will stimulate them by introducing them to activities they might not try on their own or involving them in different social networks. Research reviewed by Beverley Fehr (1996) shows that those who are socially integrated with friends (and relatives) are happier and healthier—and even live longer—than social isolates.

## HISTORICAL PERSPECTIVES AND DEMOGRAPHIC TRENDS IN ADULT FRIENDSHIP

Interest in friendship dates back to ancient times. Plato, Aristotle, and Cicero described the qualities of ideal friendship, identified categories and functions of friendship, and analyzed the role of friendship in maintaining a stable society. Their conceptions were rooted in philosophical questions about the relationship between social justice and personal happiness and in the conviction that wholesome biological and psychological development results in a spiritual or moral character.

Historical analyses show that until medieval times people spent their daily lives in close association with many community members, not just family members, and presumably found opportunities for friendship across age, sex, and class distinctions in social activity in streets and markets. With the separation of work from the home during the Industrial Revolution and the rise of the nuclear family, friendships became less central to everyday life and tended to be restricted to persons of the same age, sex, and class. Factory and office workers spent more time away from home and had less time for

leisurely pursuits, perhaps diminishing the importance of friendship for some. Nevertheless, friendship is considered an important part of social life for both workers and nonworkers in contemporary society. Spouses are supposed to be friends, employees expect to have friendly relations at work, and most people place a high value on friendship despite the demands of work and family responsibilities.

A 2002 survey of a nationally representative sample of 1,000 American adults revealed some interesting features of adult friendship. Many friendships are long-lasting. In fact, 65% of Americans have known their best friend for at least 10 years and only 15% have known their best friend for fewer than 5 years. (In this survey a spouse was not eligible as a best friend.) Most adults share social characteristics with their best friends. Specifically, 92% of women and 88% of men have a best friend of the same sex, 73% of adults have a best friend within 5 years of their own age, 73% of married adults have best friends who are married, and 70% of unmarried adults have best friends who are unmarried.

The survey also revealed that contemporary adult friends are in frequent contact and enjoy spending time together. Among the respondents 45% meet with their best friend at least once per week, 23% talk to their best friend on the phone daily, 40% of online adults exchange e-mail and 23% exchange instant messages with their best friend weekly, and 41% send letters or cards, although the frequency is less than once a month. The survey also showed that 91% said they would enjoy going on vacation with their best friend. Age and sex influence the mode of interaction. Younger adults are most likely to send e-mail or instant messages to their best friend. Older adults are most likely to send handwritten cards and letters, but younger adults do so more often than middle-aged adults do. Women are more likely to phone their best friend or send e-mail or instant messages, whereas men are more likely to meet their best friend in person.

## STRUCTURAL FEATURES OF ADULT FRIENDSHIP

Friendship structure refers to the characteristics of the people who become friends and of the ties linking individuals to their friends. One structural feature of friendship is homogeneity, that is, whether friends are of the same sex and race and are similar in age and social class. Another is hierarchy. Often friends have equal power and social status, but sometimes people choose to be friends with someone who is more or less influential or of a different status. Friendships also vary in terms of the degree of intimacy (which researchers refer to as solidarity) experienced within them. In addition, personal preferences combined with the context in which friendship occurs influence whether a person cultivates few or many friendships (network size) and whether a person's friends know one another (network density and configuration).

Friendship does not occur in a vacuum; rather, persons who are available to become friends and the functions and activities associated with friendship are influenced by contextual factors that include historical period, social structure, culture, geographic and spatial location, and temporal patterns related to schedules and routines in everyday life. These external elements intersect with one another and change over time, leading to virtually limitless complexity in the range of influences on friendship.

During the high school and college years, many people are friends with others near their age and similar in other personal characteristics because those are the people they know; from this group of available social contacts, they find friends with whom they feel comfortable and share interests. Employment may bring chances to become friends with people from many age groups, as the workplace offers chances to interact with them regularly. Outside work, young adults tend to be close friends with others of the same marital status, and to find friends through sports, church, volunteering, and neighborhood groups. Middle-aged people are sometimes so busy with work and family demands that they have little time for friends and interact mainly with their best friends. Upon retirement, older adults often have time to add to their friendship circle through their leisure pursuits. Many seek friendships with younger persons because they realize they are at risk of losing their same-age friends to old-age-related illness and death.

## ADULT FRIENDSHIP INTERACTION PROCESSES

The interactive aspects of friendship consist of behavioral, cognitive, and affective responses that occur among friends. Behavioral processes include communication, which often takes the form of self-disclosure as well as assistance and advice; shared activities; conflict; and many other forms of interaction. Cognitive processes signify the internal thoughts that partners have about themselves, friends, and friendships. They include evaluations of each person's performance in the friend role, an assessment of the stability of the friendship, perceptions of similarity on psychological attributes, judgments of the friend's character, explanations of events occurring within the friendship, and interpretations of each partner's intentions and needs. Affective processes include emotional responses to friends and friendships. Both pleasant and unpleasant emotions can be involved in friendship, ranging from love and satisfaction to jealousy and anger.

## PHASES OF FRIENDSHIP IN ADULTHOOD

Friendships are not static but have multiple possible phases. Friendships begin when acquaintances have opportunities to know one another better, reveal personal information about themselves, and discover shared interests and values. Friendships continue through a sustaining phase, which can be long-lasting and can encompass increasing, decreasing, or fairly stable levels of closeness and interaction over time. Some friendships end, often by fading as friends drift apart because of changes in lifestyle and interests, geographic separation, or competing demands. On rare occasions people terminate a friendship purposely, typically as a result of betrayal or irresolvable conflict. The phases of friendship are not necessarily linear. For example, high school friends who have drifted apart may renew their friendship in adulthood if they resume regular interaction.

## NEW DIRECTIONS IN ADULT FRIENDSHIP RESEARCH

Although early research on friendship tended to highlight the positive aspects of interactions among friends and the benefits of friendship, later studies documented the potential for disappointment and conflict in friendship as well. Studies show that some adults tolerate characteristics that are less than desirable if the friend and the friendship fill important needs. However, certain behaviors are likely to lead to strife and the dissolution of a friendship, including criticism, jealousy, and disputes over matters such as business affairs. More research is needed on the extent to which adults experience friendship dissolution, the effects of conflict between friends on personal health and well-being, and the strategies adults use to resolve friendship problems.

Research on friendship among college students and older adults is more prevalent than studies of friendships among middle-aged adults and among young adults who do not attend college. A fuller understanding of friendship structure, interactive processes, and phases could be obtained from studies of the latter groups. In addition, comparative studies of friendship across subcultural and national groups are needed for a comprehensive understanding of friendship. In light of the ubiquitous nature of friendship in adulthood and its important contributions to well-being, increasing the range of information would enable professionals to develop plans to foster the establishment of meaningful friendships, advise people about the best ways to sustain satisfactory friendships, and aid those with friendship troubles.

**SEE ALSO** Volume 2: *Sibling Relationships, Adulthood; Social Integration/Isolation, Adulthood; Social Support, Adulthood.*

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***Rosemary Blieszner***

# G

## GAMBLING

Gambling is a behavior in which a person puts something of value at risk. When gambling is offered as a commercial product, a person risks money on the outcome of some event, with the possibility of receiving a monetary return if a certain outcome occurs. Governments at the state level offer some forms of gambling and regulate all others. Casinos typically offer slot machines, video poker machines, and a variety of table games (e.g., blackjack, craps, baccarat). Many state governments in the United States offer lotteries, in which people buy tickets with a very small chance of winning a very large jackpot. Other forms of gambling (e.g., betting on horse racing and greyhound racing) are available in several states. Online casino gambling and poker have become very popular in recent years. Some forms of gambling represent games of skill (e.g., casino table games, poker), whereas others are purely games of chance (e.g., lotteries, slot machines).

People who gamble typically see it as a form of entertainment. Gambling is an *experience good* such as watching a movie or a football game, and not a *tangible product*, such as computers or shirts. People are willing to pay for experience goods because the experience itself provides benefits. For example, casino games may be fun to play, often have a social aspect, and offer a chance to win money. Many casinos are built with amenities such as hotels, live theater shows, and restaurants that gamblers also can enjoy. Lotteries offer a chance to win a very large amount of money (usually millions of dollars); many people enjoy thinking about what they would do if they won a large jackpot.

However, by their nature, gambling products have a negative *expected value* for the player. This means that, on average, the players of such games are expected to lose. Casino games typically have an expected value of around -5%, depending on the game, whereas lotteries have an expected value of around -50%. This means that for each $100 bet placed at a casino, the casino keeps an average of $5; for each $100 of lottery tickets purchased, the government selling the lottery keeps an average of about $50. Typically the Website hosting a poker game will keep a small percentage of each hand's total bets. The *house* is able to keep these amounts, on average, and this represents the income they receive for providing the games, facilities, and other costs of doing business. Some players *will* win, but most gamblers understand that casino games and lotteries have, on average, a negative expected value. For people to be willing to gamble, then, they must expect the benefits of playing (e.g., the chance of winning, the enjoyment, any social interactions) to exceed their expected losses, which can be thought of as the *price of gambling.* Just as a person must pay $10 or more to watch a movie at the theater, he or she expects to lose some money to the casino for playing its games.

### GAMBLING OVER THE LIFE COURSE

Research by psychologists has focused on gambling among adolescents, adults, and senior citizens. This research is still in its infancy, but rates of gambling participation are a major focus of researchers. Lifetime participation rates are often estimated at more than 70% for all age groups—a majority of people, including adolescents, have gambled at some point in their lives. The gambling participation rate varies by demographic group, geographical location, legal restrictions, and other variables. For example, in Australia, gambling is a much more common and acceptable form of

***Slot machines.*** *Casino games are an "experience good" because they may be fun to play, often have a social aspect to them, and offer a chance to win money.* FIELD MARK PUBLICATIONS.

entertainment than in the United States. Therefore, the participation rate in Australia is expected to be higher than in the United States where casino gambling is a relatively new phenomenon except in New Jersey and Nevada.

Many adolescents gamble but not always in market-based gambling such as casinos and lotteries. Students may bet on sporting events, play poker, or other social forms of gambling. Such activities are counted in participation rates. Few adolescents develop gambling problems, but still, such gambling is viewed with concern, to the extent that it may lead to problem gambling as an adult. However, for most people, gambling represents a harmless form of entertainment.

## PROBLEMATIC GAMBLING

A small portion of gamblers develop what has been termed *pathological gambling*, in which an individual damages his or her personal and professional life because of an unhealthy amount of or a preoccupation with gambling. In 1994, the American Psychiatric Association (*DSM-IV*) suggested that the prevalence of pathological gambling was around 1% of the population. Psychologists, psychiatrists, and medical researchers are interested in understanding the causes of problematic gambling behavior. Among the issues related to pathological gambling are the rate of the affliction (prevalence), how it affects different demographic groups differently, different rates of severity, and the types of behavior that result from or characterize it. Some researchers have focused on youth gambling behaviors and effects, whereas others have focused on gambling among members of minorities, gambling in various cultures, and society as a whole. Different samples of the population may be affected by pathological gambling in different ways.

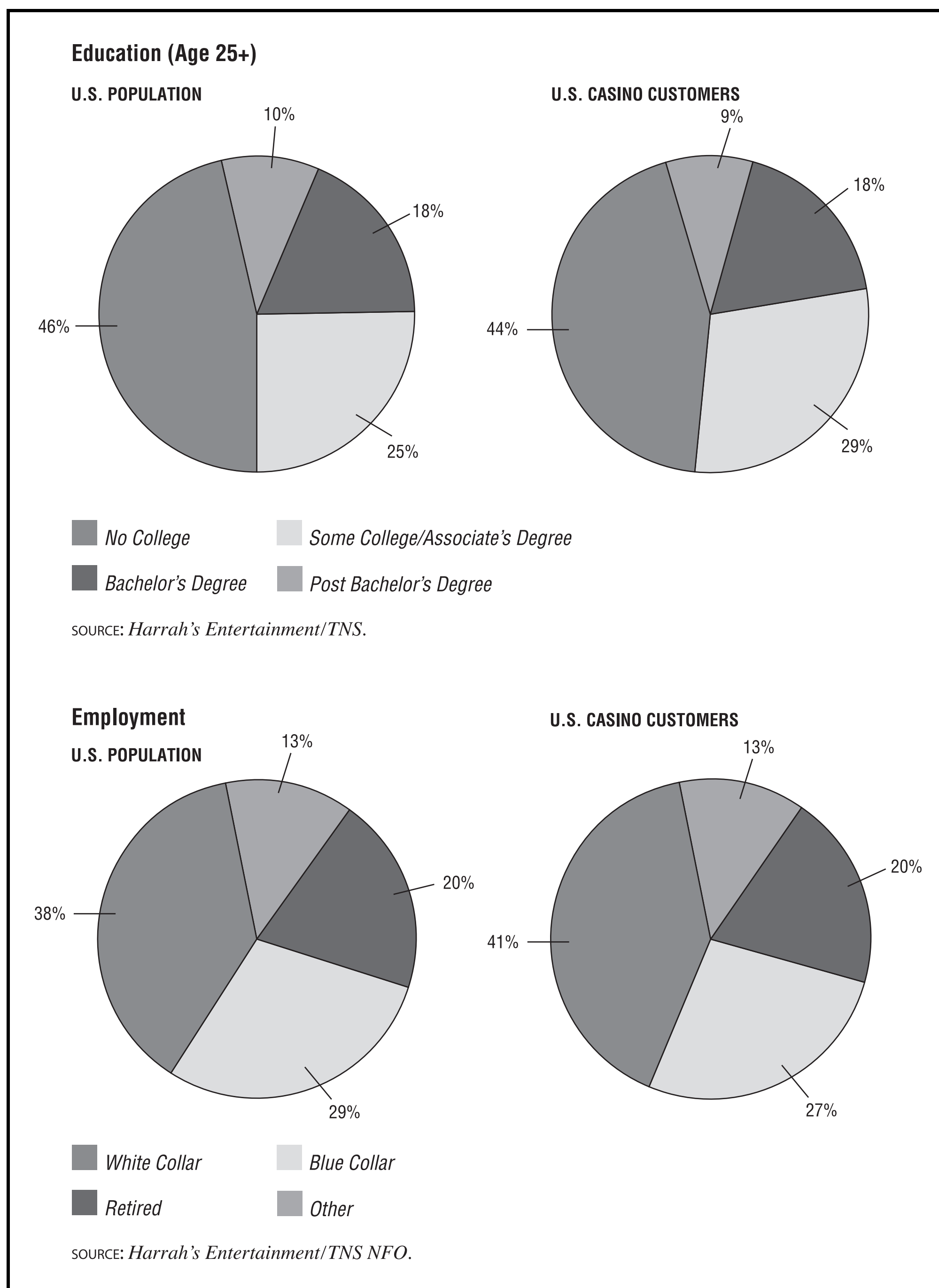


***Figure 1.*** *The average U.S. casino customer is more likely to have attended college and hold a white collar job than the average American.* CENGAGE LEARNING, GALE.

The results of such studies depend on the sample being studied, cultural idiosyncrasies, legal restrictions, research methodology, and other factors. The newest and most promising area of research related to pathological gambling deals with the neuroscience of addiction (Ross, Sharp, Vuchinich, & Spurrett, 2008). This research examines the role of processes inside the brain in initiating and sustaining addiction and promises to improve prevention and treatment strategies. This area of research overlaps with research on other addictions, such as alcoholism and drug abuse. Some researchers have suggested that all forms of addiction, and related behaviors, are not

medical issues, but are instead nothing other than very strong preferences (Becker 1996; Schaler 2000).

### CONSEQUENCES OF THE GAMBLING INDUSTRY

The other major research interest with respect to gambling is involved with the social and economic effects of the gambling industry. Many governments (local, regional, and national) have either adopted or are considering the adoption of gambling as a public policy tool, primarily to raise tax revenues. Economic studies of the effects of gambling have become more common in recent years, focusing on cost-benefit considerations.

On the *cost* side of gambling adoption are issues of pathological gambling and related behaviors. As psychologists, sociologists, and others attempt to measure the prevalence and severity of such behaviors, economists attempt to quantify these costs. This area of research has been fraught with methodological problems, particularly related to how to define *social costs* and how to measure them in monetary terms (Walker, 2007). No reliable estimates of the social costs of pathological gambling yet exist.

On the benefit side of the equation, most advocates of legalized gambling argue that there are significant consumer benefits, tax benefits, and economic development effects, particularly owing to large casinos. Perhaps the most important and sizable of these benefits is the consumer benefits received from the availability of gambling. If consumers did not enjoy gambling, they would not do it. The facts that casinos earn profits and lotteries continue to raise revenues indicate that people do enjoy gambling. Aside from these consumer benefits, the most common benefits derived from legalized gambling appear to be tax revenues from lotteries and casinos, and economic development, in the case of casinos.

Overall, results of existing research suggest that the economic benefits of legalized gambling (including consumer benefits, development and tax effects) probably outweigh the costs of pathological gambling. However, such economic and medical research is still in its infancy. Before researchers can develop reliable monetary estimates of costs and benefits, many conceptual and methodological issues need to be sorted out. As gambling expands, the gambling industry and government are beginning to offer more help for problem and pathological gamblers. Such programs will become more effective as researchers develop a better understanding of problem gambling behaviors.

SEE ALSO Volume 2: *Debt; Mental Health, Adulthood; Risk.*

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***Douglas M. Walker***

## GAYS AND LESBIANS, ADULTHOOD

The adult life course of men and women who report same-sex attraction must be considered in the context of social and historical change. Following social theorist Karl Mannheim (1993 [1928]) and sociologist Glen Elder (2002), persons born within adjacent birth years comprise a generational cohort and are subject to many of the same social influences at about the same ages. At the same time, there is considerable intra-cohort variation based on such factors as geography, social status, ethnicity, or sexual orientation. This entry focuses on the interplay of social change and the life course among men and women in contemporary American society who seek others of the same sex for social and sexual ties. Social and historical change interplay with life history in determining the meanings that men and women construct about their sexuality and this is reflected in the distinct identity cohorts that have emerged from the context of social change.

Discussion of the life course of men and women expressing same-sex desire must be understood in terms of three aspects of their sexuality: sexual orientation, sexual behavior, and sexual identity (Savin-Williams, 2005). Sexual orientation refers to awareness of a preponderance of desire for social and sexual encounters with others of the same sex. Desire must be distinguished from sexual behavior, which is the realization of desire in action. Sexual orientation and behavior must in turn be differentiated from sexual identity, that is, the label that men and women use in portraying their sexuality. Biologist Alfred Kinsey et al. (1948), psychologist Ritch Savin-Williams (2005), and philosopher of science Edward Stein (1999) maintain that sexual attraction cannot be viewed as either straight or gay but that sexual attraction instead ranges from complete affinity for the opposite sex to that for one's own sex. This perspective has been supported in Lisa Diamond's (2006) study of young adult women and in Stein's (1999) careful review of quantitative findings regarding homosexuality.

Across generational cohorts in contemporary American society, the narrative of sexuality told by men is most often that of an awareness of same-sex desire that reaches back into childhood or early adolescence and that remains fixed across the life course. Women are more likely than men to portray a variable sexuality across the course of life, involving partners of both the same and the opposite sex. Reviewing findings regarding the expression of same-sex awareness among men and women, Phillip Hammack (2005) has described the life course of women with awareness of same-sex attraction as one of sexual fluidity in which the primary focus is on relationships and a "sex-unspecific pattern of erotic preference" (p. 271).

Understanding of self and sexuality among men and women coming to adulthood and aware of same-sex desire varies across generations because it is closely tied to social and historical change. As historian George Chauncey (1994) has shown in his discussion of the definition of same sex-desire across the past century, the very terms used to portray this desire have changed over time. Within contemporary European and North American society, men and women presently entering late life and aware of same-sex attraction were born in the years preceding World War II (1939–1945) and came to adulthood in the conservative postwar era. With same-sex desire stigmatized by the larger society, to the extent that these men and women even sought social and sexual contact with others of their own sex, meetings were furtive in bars and other venues and were always in danger of exposure with the possibility of criminal sanctions.

Some men aware of their same-sex desire joined the clandestine Mattachine Society, while women seeking same-sex ties joined the Daughters of Bilitis. These homosocial groups were increasingly active in the advent of the civil rights movement in the 1960s. These men and women had often chosen solitary or low-key occupations, such as that of an accountant or librarian, where they could keep "below the social radar," and be able to avoid discussion of their personal life with work colleagues. These men and women often define their sexual identity as *homosexual*, a term common in a time that still viewed same-sex desire as evidence of personal maladjustment.

Sexual orientation, conduct, and identity within generational cohorts born later in the 20th century have been significantly influenced by social and historical change. Men and women born in the immediate postwar period came to adulthood in the turbulent years of the 1960s and 1970s. Often aware from childhood of same-sex desire that was regarded at the time as a source of shame and stigma, many of these men and women were emboldened by the civil rights movement and the tentative social activism of the preceding decade to seek tolerance from the larger society. This generation came to adulthood at a time of dramatic social change and at a time when membership in a sexual minority group was becoming recognized as one of a number of sexual lifeways. Much of this activism was mobilized in the aftermath of patron resistance to a June 1969 police raid on the Stonewall Inn, an establishment frequented by men and women seeking same-sex camaraderie. This raid galvanized young adult patrons and their friends to demand an end to police raids and inspired visible social activist groups nationwide across the following decade. This activism marked the advent of the gay rights era and resulted in ordinances prohibiting discrimination on the basis of sexual orientation in many cities nationwide. For the first time it was possible for men and women to enjoy same-sex companionship in now visible bars and other spaces. It was also possible to publish newspapers reporting on the activities of the community, which included advertisements for bars and for men and women seeking others as social and sexual partners. Men and women within this cohort often chose the label *gay* and *lesbian* to describe their identity. This generation eschews the term *homosexuality*, because to them it associates awareness of same-sex attraction with psychiatric illness.

The very social changes that made possible socially visible spaces in which to find other men and women with same-sex desire led to anonymous and casual sexual partners. These practices increased the possibility of transmitting a virus that silently destroyed the immune system over a number of years, which became manifest in the following decade as a fatal disease. First reported in the *New York Times* in the summer of 1981 as a rare cancer striking a group of men in San Francisco acknowledging same-sex conduct, the means of transmission and tests for AIDS were available by the mid-1980s. Between 1980 and 1995, when the first medications were discovered that would turn AIDS into a chronic rather than life-threatening illness, several hundred thousands of men had died from complications associated with AIDS. By the mid-1980s most school sex education programs featured the importance of practicing safer sex; men and women coming to adulthood, then, better understood the implications of risky sexual practices.

This young adult generation of self-identifying gay men and lesbians made their community through their activism, and later assisted by the Internet, were able to help other men and women aware of their same-sex desire to learn that they were not alone. Even in high school these young adults had been able to "come out" without the opprobrium that had greeted previous generations. Forming an identity cohort characterized by demand for respect for their sexuality, this generation now in middle adulthood presumes their right to make their own life free from stigma or legal restriction.

The most recent generation of adults coming to adulthood, who follow the activism of preceding generations, presumes that there is little relationship between sexual orientation or sexual desire and conduct and other aspects of their life as they emerge into adulthood. Many of these men and women maintain that their sexual preference for same- or opposite-sex partners has little relevance to who they are as persons. These young adults either identify themselves as *queer* or as *spectrum* (meaning other than completely heterosexual on the six point Kinsey scale of same-sex attraction) or, more often, explicitly reject any sexual or other identity labels (Cohler & Hammack, 2007). Whereas Anthony D'Augelli (2002) has portrayed the struggle of young adults in previous generations to deal with their same-sex desire when faced with shame or hostility at home and in the community, Bertram Cohler and Hammack (2007) observe that changing social circumstances have shifted the narrative of young adulthood among more recent young adults from a narrative of struggle and suppression to a narrative of emancipation. To an even greater extent than youths in the preceding generation, these young adults presume that their sexuality is not relevant to their accomplishments at school and work or their participation in the larger community. Research confirms this presumption: There are few socio-demographic differences in sexual orientation (Badgett, 2001), although these findings are based largely on studies of convenience samples.

***AIDS Quilt.*** *A view from the Washington Monument on Oct. 11, 1996, shows the huge AIDS Quilt laying on the ground, stretching from the monument to the U.S. Capitol.* AP IMAGES.

Accompanying the social and historical change that has been the background for personal development across these generational cohorts in American society, each generational cohort has been challenged by unique developmental tasks that may not be generalized to later cohorts moving across the course of life from early adulthood to later life. Further reciprocal socialization means that cohort effects across generations shaped the subsequent course of life for each generation in a manner unique to a particular time and place. For example, the very success of current young adult and middle-aged generations in charting a new path in society has led many formerly hidden elders to come out and to found new homophilic organizations such as Senior Action in a Gay Environment (SAGE), which lobbies for quality senior housing for older same-sex attracted men and women no longer able to live alone. A lifetime of increasing competence in dealing with stigma has equipped these older adults to manage the dual prejudices of their aging and their sexuality. At the same time, the lifelong experience of sexual minority stress and stigma has taken its toll on the morale of members of this generation (Meyer, 2003), a toll that is unique to this generation of elders with same-sex orientation and cannot be assumed to characterize later cohorts of men and women with same-sex attraction. It is important to distinguish between the effects due to aging from those due to membership in a particular cohort.

The present generation of men and women in settled adulthood has participated in much of the social change since the emergence of the gay rights era of the 1970s. Many of these adults still grieve the death of romantic partners and friends from the AIDS pandemic. Viewing the AIDS Memorial Quilt composed of squares memorializing the lives of those who died from AIDS, it is striking how many of these squares are for men born in the 1950s and dying in the time between the mid-1980s and the mid-1990s. Members of this generation experienced loss and mourning more characteristic of later life within the heterosexual world. Despite these experiences of grief, Cohler and Robert Galatzer-Levy (2000), in their review of studies of the association of sexual orientation and mental health, report few differences in well-being among persons who report primarily same- or opposite-sex attractions. However Ilan Meyer (2003)

has shown that greater prejudice due to sexual minority orientation experienced in childhood and adolescence is associated with lower morale experienced across the adult years.

Current cohorts of midlife adults also belong to the first generation for which the normative adult role transitions of legally recognized romantic relationships or marriage and parenthood are available as choices. While the desirability of same-sex marriage as an option continues to be controversial among both men and women with same-sex attraction and also within the larger community, several states have accorded legal protection for two men or two women entering into long-term sociosexual relationships. The state of Massachusetts and entire countries such as Canada and the Netherlands explicitly sanction same-sex marriage (see sidebar).

Chauncey (1994) views both legal protection for same-sex romantic unions and legal protection for parenthood among men or women open about their same-sex attraction as the outcome of a process of social change over the postwar period. This is nowhere more evident than in the enhanced opportunity for men and women open about their same-sex desire to adopt children. About one-third of women forming a same-sex relationship have children from a previous heterosexual relationship. Most states permit single men or women to become foster parents and to legally adopt the children in their case. Advances in reproductive technology have made it possible for women to share biological parenthood in which the baby is the product of one partner's egg, sperm donation from either a man who is a friend of the couple or an anonymous donor, and carried to term by the other partner. The birth mother in these same-sex couples reports less stress than her heterosexual counterparts as the other partner is much more involved in child care than men in traditional heterosexual marriages. Men may call upon a friend to serve as a surrogate mother with sperm from either or both partners fertilizing the egg.

Early studies of the effect of parental sexual orientation on child outcomes were based on convenience groups using same- and opposite-sex parents agreeing to a comparative study of children in the classroom and the playground. More recent studies have been based on large-scale national surveys. Taken together, these studies reveal that children raised by same-sex couples do not differ in their adjustment and subsequent life course from children growing up in traditional heterosexual families (Patterson, 1995), although they tend to be particularly tolerant in their social attitudes. When same-sex couples, particularly men, elect to adopt, agencies may still offer the most desirable children to heterosexual couples. Children offered for foster parenthood or adoption for either single men or same-sex men couples may he at higher developmental risk resulting from foreign birth or biological parental pregnancy and childbirth than children raised by heterosexual couples. These children may be born with some developmental infirmity such as fetal alcohol syndrome or may have such developmental disabilities as developmental delay. However, the motivation for generativity or the need to care for the next generation means that these children get unusually good care and may be helped to overcome these developmental problems.

The current young adult generation of men and women aware of same-sex attraction is unique in two respects. In the first place, the generation of youth or emergent adulthood is itself a generation that was not explicitly recognized in American society until the postwar period. In the second place, while previously stigmatized by peers and teachers, adolescents and young adults aware of same-sex attraction have empowered themselves

## SAME-SEX MARRIAGE

Same-sex (or equal) marriage refers to a union between two persons of the same sex that provides the same legal status and protection that is provided to married heterosexual couples. Belgium, the Netherlands, Canada, Spain, and South Africa currently recognize same-sex unions as a marriage. Some nations such as Israel offer formal recognition for same-sex unions. Whereas one state in the United States (Massachusetts) allows same-sex marriage and eight states provide the same protection for same-sex domestic partnerships as for heterosexual unions, 26 other states explicitly ban using the term *marriage* to refer to the union of a same sex couple. Historian George Chauncey (2004) traces the demand for same-sex marriage to the gay rights era beginning in the 1970s, which by the 1990s led both to many employers offering domestic partnership benefits, and to a series of court decisions regarding the protection of privacy. Opponents of gay marriage maintain that marriage presumes procreation and that persons of the same sex cannot produce offspring (Sullivan, 1997). However, that presumption is not a part of federal or state law regarding heterosexual marriage.

with the support of both peers and adults. They have been supported in their ability to overcome prejudice—prejudice that in earlier youth cohorts led to sexual minority stress by groups at school and college and even in the workforce—with resources available on the Internet and provided by other questioning and same-sex defined peers and elders.

As a consequence, the life story of members of this generation has shifted from one of struggle to overcoming prejudice to one of emancipation with issues of struggle largely irrelevant in urban America. The change is reflected in the reluctance of these youths to adopt identity labels such as *gay* and *lesbian* or even *queer*. The concern of this generation is with their own success in education and work and perhaps with finding a relationship with a like-minded man or woman aware of his or her own same-sex desire. It is common for these men and women aware of same-sex desire to have close friends and to be part of social groups varying in their commitment to same- and opposite-sex social and romantic relationships. For members of this generation of emergent adulthood, concern with issues of sexual identity appears to be much less of a concern than finding satisfying work and meaningful relationships. Cohler (2007) has illustrated this shift in discussing the blog of a Midwestern college student writing about his boyfriend, his straight fraternity friends, and their views regarding work, relationships, and their future prospects.

The life course of present generations of men and women from youth through middle age aware of their same-sex attraction is increasingly similar to that of their heterosexual counterparts. From the experience of social isolation and sexual minority stress due to stigma characteristic of the oldest generation of same-sex attracted men and women, generations of same-sex attracted men and women within present cohorts across the first half of life have become virtually indistinguishable from their opposite-sex attracted peers. Further, this social change is leading to backward socialization among older adults who now see new possibilities for their life as they embrace social activism. Whereas conservative commentator Andrew Sullivan (1996) celebrates this change, radical social commentator Michael Warner (1999) decries the loss of the vibrant culture created by minority sexuality men and women following the gay rights revolution. However, it is clear that sexuality cannot be discussed apart from social change and the impact of this change upon the life courses of the various generational cohorts born in the 20th century.

**SEE ALSO** Volume 1: *Gays and Lesbians, Youth and Adolescence;* Volume 2: *Dating and Romantic Relationships, Adulthood; Sexual Activity, Adulthood;* Volume 3: *Cohort; Gays and Lesbians, Later Life.*

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***Bertram J. Cohler***

## GENDER DISCRIMINATION

SEE Volume 2: *Sexism/Sex Discrimination.*

## GENDER IN THE WORKPLACE

Women's rapid movement into the paid labor market over the past century has had an impact on childrearing, marriage, gender equality, and the labor market itself. Whereas in the past most women devoted their time to caring for their families, women's life courses are now shaped by the combined influences of family and work. In the early 21st century, women in the workplace experience many opportunities, but there are still key issues and challenges.

### TRENDS IN WOMEN'S LABOR FORCE PARTICIPATION IN THE UNITED STATES

Women's participation in the paid labor market increased dramatically during the 20th century. In 1890 only 18% of women were in the labor force. Women's labor force participation rose slowly but steadily through the early 1900s, reaching 28% in 1940. During World War II women were actively recruited into jobs that supported the war effort, with the result that their labor force participation rates jumped to 36% in 1945. When soldiers returned home after the war, some women returned to homemaking, but the decline in women's labor force participation rates was short-lived. By 1960, 38% of women age 16 and older were in the labor force, and this participation rate increased every decade until it reached 58% in 1990. Women's overall labor force participation rate hovered between 58 and 60% until the early 2000s (Blau, Ferber, & Winkler, 2006). These numbers are even higher among women who have completed their schooling and have not yet retired. For instance, in 1998, 76 to 78% of women age 25 to 34, 35 to 44, and 45 to 54 participated in the labor force (Fullerton, 1999). The rise in women's employment occurred in most racial groups. For example, Bart Landry (2000) documented that the percentage of married African American women in the labor force increased from 1940 until 1994. The percentage of African American married women in the labor force was higher than that of White married women in each decade among both upper and lower middle class women. In addition to greater financial need, Landry explained that the Black–White difference was due to Black women, particularly Black middle-class wives, embracing a different version of "true womanhood" that included a commitment to both family and career. These racial differences in employment among married women are still evident in the 21st century. Among young single women, however, White women are working at higher rates than both Blacks and Latinas (see Taniguchi & Rosenfeld, 2002).

Women's roles as wives and mothers have typically had an impact on their participation in the paid labor market, but women's approaches to navigating work and family across the life course have changed substantially over time. In the early part of the 20th century, women typically worked when they were young and single, exiting the labor force when they married or had children—if they could afford to live on only their husband's income. However, labor force participation rates for women with young children have increased rapidly since the 1950s. For instance, only 17% of women experiencing their first birth between 1961 and 1965 were working 12 months after the birth. In contrast, between 2000 and 2002, nearly two-thirds (64%) of new mothers were working 12 months after the birth (Johnson, 2008).

The reasons for this dramatic shift have been studied extensively. Economists argue that women's labor market decisions are based on a comparison of the value of market time (or time at work) to the value of nonmarket time (or time at home). According to this theory, people's decisions are based on *opportunity costs*, that is, an assessment of the costs of making one choice relative to the costs of choosing something else. Over the course of the past century, the value of women's market time increased greatly and the value of women's nonmarket time decreased greatly, leading women to spend a larger proportion of their lives employed (Blau et al., 2006).

Increases in women's educational attainment are an important factor underlying shifts in the value of women's market and nonmarket time (Blau et al., 2006). In 1940 only 4% of women had completed a college degree, but by 2007 this had risen to 28% (U.S. Department of Education, 2007). Men's educational attainment also rose over this period, but women closed, and even

## OPTING OUT

Since the 1980s, the media have disseminated stories about professional women opting out, or leaving the workforce, to care for their children. The claim that society is experiencing an opt-out revolution (Belkin, 2003) has spurred debates about whether mothers with professional jobs really are opting out and, when they do, about their motivations for doing so. Evidence on the extent of the opt-out revolution is mixed. Studies examining the work decisions of all women tend to show little evidence of an opt-out revolution (Boushey, 2008; Cotter, England, & Hermsen, 2007), but one study indicated that college-educated women in their late 20s are spending less time in the labor market than did earlier cohorts of young educated women (Vere, 2007). Although some mothers who leave their jobs express a clear preference for staying at home, many others feel pushed out of work by the competing demands of an inflexible workplace and motherhood (Stone, 2007).

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reversed, gender gaps in educational attainment. In 1900 only 19% of college degrees were awarded to women, whereas in 2006 women earned more than half (58%) of all college degrees (U.S. Department of Education, 2007). These changes in educational attainment have led more women to aspire to professional careers than in the past and mean that women face clear losses in earned income and professional advancement if they exit the labor market when they have children.

Indeed, despite the common impression that women with low education and limited labor market skills (who are more likely to be single or partnered with a low earner) are the most likely to work because they need the income, in reality women with higher education levels are most likely to work when they have young children. Of women experiencing their first birth between 2000 and 2002, 62% of women with less than a high school education did not work within a year of their child's birth compared to 40% of women with a high school degree and 27% of women with a college education or higher (Johnson, 2008). In addition to the career aspirations of women with higher education, researchers have identified multiple barriers to the employment of low-educated women. High childcare costs, low childcare quality, lack of access to a car, and health limitations of the mother or the child all contribute to the challenges that mothers with low education and wages face when trying to combine work and family (Roy, Tubbs, & Burton, 2004; Scott, London, & Hurst, 2005).

A second factor pulling women into the labor market may be changes in the availability of other sources of income, such as their partners' earnings or welfare and other government benefits. Peter Gottshalk (1997) indicated that since the 1970s the earnings of men with the weakest labor market positions (e.g., low education levels, limited job skills) have declined. The level of welfare payments and the ability to collect welfare without working have also declined (Committee on Ways and Means, 2004). These changes should push more women into the paid labor market, particularly women with low education levels and single mothers. Although mothers with low education levels are still less likely to work when their children are young than mothers with higher education levels (Johnson, 2008), in the late 1990s there was a sharp increase in the labor force participation rates of single mothers (Blau et al., 2006).

In addition to the forces increasing the value of women's time in the market, many forces have reduced the value of women's nonmarket time (Blau et al., 2006). Moving from an agrarian society to an industrial society reduced families' dependence on women's domestic labor as families became less likely to produce their own food and clothing. Domestic responsibilities continued to decrease with the advent of dishwashers, laundry

machines, and precooked meals readily available for purchase. Families are smaller than in earlier centuries, reducing the time that women spend pregnant or nursing infants. Additionally, the rapid increase in nonmaternal childcare options provides parents with more opportunities to enter the labor market.

## KEY ISSUES AND CHALLENGES FACING WOMEN IN THE WORKPLACE

Some of the key issues and challenges facing women in the workplace include the gender wage gap, discrimination, the glass ceiling, and sexual harassment.

**The Gender Wage Gap** Despite women's increased educational attainment and strengthening attachment to the labor force, women working full-time still earn less than men working full-time. Estimates of the gender wage gap differ somewhat based on whether researchers compare men's and women's annual earnings or hourly wages, because men tend to work more hours than women. Regardless of the measure used, the gender wage gap has closed over time but has not disappeared. From 1979 to 1998 the ratio of women's to men's hourly wages increased from 63% to 80% (Blau & Kahn, 2006). Several factors explain the gender wage gap, including differences in what women and men choose to study in school, the occupations that women and men enter, the number of years women and men spend employed, and discrimination.

As noted earlier, women are now more likely than men to complete a college degree. However, this trend masks variation that is key to understanding the gender wage gap: Women and men choose very different academic majors. In 2000–2001 women earned just 28% of the bachelor's degrees awarded in computer and information sciences, 20% in engineering, and 34% in economics. In contrast they earned 78% of the degrees in psychology, 77% in education, and 84% in health (Blau et al., 2006). Among those with college degrees, these differences in educational choice translate into women and men holding very different jobs—with very different earning trajectories.

Among those without college degrees, women and men also hold different jobs. Different jobs translate into different pay, authority, and social status (Reskin & Padavic, 1994, p. 31). Jobs that are primarily filled by women and/or minorities tend to require lower level skills and, in turn, provide low wages (Tomaskovic-Devey, 1993). In 2000, women represented more than half of the workers in several major occupational groups such as sales and office work, service (Gist & Hetzel, 2005). A greater percentage of men (58.1%) than women (41.9%), however, held management, business, and financial jobs, which are generally more lucrative and require more training than sales and service positions. Even after controlling for skill demands, "female occupations" (i.e., jobs comprised of mostly women) pay less than "male occupations" (England, Allison, & Wu, 2007; Huffman, 2004). Pay discrepancies rooted in gender-typed career choices are not easily remedied by public policies. The Equal Pay Act of 1963 requires equal pay for equal jobs. This law does not, however, prohibit employers from paying less to all workers in predominantly female occupations than workers in predominantly male occupations (Reskin & Padavic, 1994).

Jobs that women typically hold have been referred to as *women's work*, a derogatory label emphasizing the low status of these jobs (Tomaskovic-Devey, 1993). In particular, care work, which includes jobs such as childcare provider, nurse, and teacher, is synonymous with women's work. Childhood socialization, in which girls and boys are taught normative gender roles, likely plays a large role in the ultimate educational and occupational choices of women and men. Women do the majority of both paid and unpaid care work, because it meshes with gender roles emphasizing women's capacity for nurturing. The low pay and support for these workers, despite the large skill set required for these jobs, leads many to argue that care work is devalued (England, 2005). Despite continuing gender segregation in care work, other industries showed a decline in segregation between 1996 and 2003. This decline was due in part to the rise in service sector jobs, which are less segregated than jobs in other industries (Tomakovic-Devey et al., 2006).

A second factor that explains the gender wage gap is the amount of time men and women spend in the labor force. The time invested in paid employment, in terms of gaining work experience as well as skills relevant to one's own employer, is often called *human capital*, those skills and experiences that a worker "sells" on the market. Men and women follow very different employment trajectories, with men more likely to work continuously and women more likely to follow a variety of paths that include transitions to and from the labor market as well as spells of part-time employment (Hynes & Clarkberg, 2005; Moen & Han, 1999). Researchers estimate that about 11% of the gender wage gap is due to differences in labor force experience (Blau et al., 2006).

Parenting demands are among the key reasons why women have more discontinuous work histories than their male peers, but children play a role in women's earnings beyond differences in labor force participation. Researchers have begun to study differences in earnings between mothers and nonmothers and have found what they now call a *motherhood wage gap*. Compared to

nonmothers, mothers experience a wage penalty of about 7% per child. Here too, labor market entrances and exits explain only part of the gap in pay between mothers and nonmothers (about one-third), leaving the remaining two-thirds of the gap unexplained (Budig & England, 2001). Research in this area is still underway, but some of the hypothesized explanations for the unexplained gap include differences between mothers and nonmothers in their productivity and energy while at work, their decisions about whether to take demanding jobs or to select more family-friendly jobs, and discrimination (Budig & England, 2001).

**Discrimination** Most researchers acknowledge that discrimination is likely to account for some of the gap that remains between men's and women's wages after factors such as occupation and experience are taken into account (Blau & Kahn, 2006; Budig & England, 2001). The Civil Rights Act of 1964 prohibits employers from discriminating on the basis of gender during hiring, promotion, and job assignment. The Equal Employment Opportunities Commission was created to enforce this act, but given the subtlety of many employers' intentional and unintentional actions, Joan Williams (2000) points out, it can be difficult to prove gender discrimination.

In addition to gender-based discrimination, evidence suggests that caregivers also experience discrimination, such as being terminated or denied promotion due to family responsibilities. In one case, female grocery clerks were not promoted to management because their employer believed the clerks' childcare responsibilities would prevent them from working long hours (Williams & Segal 2002). Although caregiving discrimination can happen to men, it is more likely to happen to women as they typically assume more caregiving responsibilities.

Employers may also discriminate by offering women lower wages than men. Although illegal, there are still cases in which employers pay women less than men for performing the same job (see examples in Reskin & Padavic, 1994). For example, in 2001 six women filed a lawsuit claiming, among other issues, gender discrimination in pay decisions at Wal-Mart and Sam's Club. In 2004 the federal court made it a class action lawsuit applying to all female employees at Wal-Mart in the United States. The case has not been tried or settled out of court. Pay discrimination occurs at all levels of the occupation hierarchy and is partly responsible for the increasing gender wage gaps over the life course (Maume, 2004). Pay differences and differences in hiring and promotion can have a cumulative effect over time, with small differences early in a career adding up and leading to larger differences later in the life course (Maume, 2004).

Unfortunately, estimating how much of a pay gap is due to discrimination versus other factors is a difficult task as researchers rarely have information on all factors influencing wages, such as individual productivity, job experience, and whether jobs require comparable skills (Reskin & Padavic, 1994). Experimental studies can help eliminate these challenges by examining how job applicants are rated when the only substantive difference between two workers is their gender or parental status. For instance, Shelley Correll, Steven Bernard, and In Paik (2007) asked college students to rate the application materials of two job candidates for a high-level position. The students were told that their comments would be passed on to a hiring committee and may influence actual hiring decisions. The researchers constructed resumes and other materials making the applications equally qualified for the job, but they experimentally manipulated the parental status of the applicant. Their results showed that mothers were perceived as less competent and less committed to their jobs than nonmothers and that these perceptions translated into lower proposed starting salaries and higher required achievement standards for mothers.

**The Glass Ceiling** A *glass ceiling* metaphor has been commonly used to describe the invisible barrier that prevents women, particularly minority women, from advancing in organizations (Williams, 2000). Although many women have management positions, the number of women holding top-level positions, such as chief executive officer of an organization, is very small. In 1995 the Federal Glass Ceiling Commission published a report documenting a stark contrast in the number of male and female senior managers in Fortune 1500 companies: 95% of senior managers were men. Furthermore, when Mary Noonan and Mary Corcoran (2004) examined gender differences in promotion among University of Michigan law school graduates from 1972 to 1985, they found that women were less likely to be promoted to partner in law firms than were men, even after accounting for differences between men and women in factors such as grade point average in law school, number of years they had practiced law, and amount of time taken off, if any, from work to raise children. The Federal Glass Ceiling Commission identified three barriers that account for the glass ceiling: (a) societal barriers (differential opportunities for educational attainment, prejudices), (b) structural barriers within the business (initial placement in noncareer track jobs, lack of mentoring), and (c) governmental barriers (lack of consistent monitoring, inadequate reporting; U.S. Department of Labor, 1995).

Although women may have a difficult time "cracking" the glass ceiling, mothers tend to have an even more

difficult time, given the time constraints and responsibilities associated with managing a job and motherhood simultaneously. As noted earlier, mothers with low education and few financial resources often struggle to remain attached to the labor market, which can have immediate negative consequences for their own and their children's financial well-being. Taking time out of the workforce can also have consequences for career advancement. For instance, lawyers who took time out of the labor force to care for children were less likely to make partner and earned less if they did become partners (Noonan & Cochran, 2004).

Some accommodations for working mothers, such as reduced work hours, have led to concerns that they place women onto a "mommy track" that then prevents them from maintaining their previous status or from advancing further. Indeed even mothers who are not interested in these accommodations may be viewed differently once they have children and may experience changes in their work arrangements that move them into less prestigious jobs. For instance, the Federal Glass Ceiling Commission reported that upon returning to work after maternity leave, women often received less desirable assignments than they did before giving birth (U.S. Department of Labor, 1995).

**Sexual Harassment** As women have become a larger part of the American workforce, many have faced sexual harassment in the workplace. The Equal Employment Opportunity Commission (2007a) defines sexual harassment as "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature . . . when this conduct explicitly or implicitly affects an individual's employment." Although sexual harassment is illegal, a 1994 survey by the U.S. Merit Systems Protection Board (1995) found that 44% of women reported experiencing some type of harassing behavior at work during the previous two-year period. The most common behaviors reported are sexual teasing and jokes, but 10% of survey respondents indicated that they received letters, calls, or other sexual material, and 7% reported being pressured for sexual favors. Of those who reported experiencing some type of sexual harassment, only 6% reported making a formal complaint. Only half of those who made complaints reported that this improved the situation (U.S. Merit Systems Protection Board, 1995). It is unclear why more complaints were not filed, but possible reasons include fear of retaliation or job loss.

Sexual harassment can have negative consequences for health, workplace morale and productivity, and victims' career trajectories. For instance, Chelsea Willness, Piers Steel, and Kibeom Lee (2007) show that harassment has been linked to a reduction in mental wellness for female victims and an increase in rates of posttraumatic stress disorder. Sexual harassment has also been linked to heightened stress and physical illness (Rospenda, Richman, Ehmke, & Zlatoper, 2005), which can lead to frequent absences from work, strained coworker relationships, and limited productivity (Willness et al., 2007). Sexual harassment can also have lasting effects on women's careers. Victims are more likely to be dismissed or lose promotions due to absences from work (Willness et al., 2007).

## FUTURE DIRECTIONS FOR RESEARCH ON GENDER IN THE WORKPLACE

One of the most promising avenues for future research on gender in the workplace asks the question: What can be done to address the challenges that women are facing? Many scholars have outlined suggestions to eliminate the glass ceiling, reduce sexual harassment, reduce gender inequality in pay, and help individuals meet their work and family responsibilities (e.g., Catalyst, 2000; Moen & Roehling, 2004; Rapoport, Bailyn, Fletcher, & Pruitt, 2002). A wide variety of interventions and changes have been proposed, ranging from workplace policies about flexible scheduling and sexual harassment to government policies about maternity leave and childcare.

One of the challenges in this area is philosophical. A debate has existed for generations about how to define equality between women and men and what the goal of related policies should be (Loutfi, 2001; Vogel, 1993). Does equality mean that women have the same opportunities as men and receive the same penalties as men for factors such as reduced time in the labor market, or does equality mean that women and men have the same outcomes on issues such as time spent in caregiving and occupational attainment?

This controversy is still apparent in policy debates about how to address employees' needs to balance their work and family responsibilities (Lewis & Guillari, 2005). Jennifer Glass (2004) categorizes commonly proposed work–family policies into three groups. The first set promotes reductions in work hours, allowing workers (typically mothers) to reduce their time in the labor market in order to perform caregiving at home. The second set promotes schedule flexibility (adapting the timing and location of work), allowing workers to meet their caregiving responsibilities without minimizing their overall time in the labor market. The third set provides assistance to workers (such as on-site childcare or assistance finding elder care) and helping workers pay others to provide care when it is needed. These policies reflect very different choices (providing care oneself vs. purchasing care in the market) and may have very different

effects on the career trajectories and the well-being of workers and their families.

Although addressing the challenges that women face in the workplace involves grappling with the philosophical question about ultimate policy goals, research can greatly inform these debates by providing concrete information about the costs and benefits of various workplace and government policies. These studies need to be complex, because interventions with positive impacts in one domain (e.g., career attainment) may have negative impacts in another (e.g., individual or child well-being). They also need to reflect the reality that policies that are plausible and beneficial to one group of workers (e.g., professional workers, married workers) may be unfeasible or not beneficial to others (e.g., workers in less skilled occupations, single parents).

**SEE ALSO** Volume 1: *Socialization, Gender;* Volume 2: *Careers; Dual Career Couples; Employment, Adulthood; Job Characteristics and Job Stress; Occupations; Policy, Employment; Sexism/Sex Discrimination.*

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# GENETIC INFLUENCES, ADULTHOOD

One of the most influential developments in science is the growing understanding of genetics. During the last half century, the body of knowledge about genes and their consequences has flourished. As scientists' understanding of genetics has increased, the relevance of genetics to the study of a wide variety of issues has been highlighted. In this vein, understanding adult life trajectories requires taking into account individuals' genetic inheritances and their interplay with the social and physical environment.

## GENES AND EVOLUTIONARY HISTORY

A gene is a single coding segment of DNA, which is the hereditary material in all organisms including humans. The hereditary directions in DNA are stored in 3 billion bases. The order of these bases provides the blueprint for building and maintaining an organism. Genes are grouped onto chromosomes, of which humans have 23 pairs. The pairing of chromosomes means that humans have two copies of all genes, with the exception that males have only one copy of sex-linked genes (those that occur on the X chromosome and those that occur on the Y chromosome; females have two X chromosomes, males only one). Different forms of a gene are referred to as alleles, and the combination of allele forms for a particular gene are known as a genotype. A genotype corresponds to a particular set of gene products, whereas a phenotype is the observed end result of the gene process.

To understand the nature of genes as well as how they influence human lives, it is important to recognize their evolutionary past. Genes are passed along from parents to child, so a gene's "success" is measured in the number of copies it transmits to future generations. To pass genes on, an individual must reproduce offspring. Thus, genes that increased the reproductive success of an individual were more successful in the course of evolution and are more prevalent today. Conversely, genes that are present today must have been selected for reproductive advantage over evolutionary history. Because the modern world differs dramatically from the circumstances under which these genes were selected, characteristics that were advantageous then may not be advantageous today. For example, humans have evolved excellent physiological mechanisms to store energy when food is abundant, so as to sustain them in times when food is in short supply. Contemporary humans can be considered as selected for genes that favor energy storage and that defend against weight loss. Contemporary industrialized societies, however, are characterized by low levels of physical exercise and abundant food supply. It is this misfit between one's primeval genes and modern lifestyles that accounts for the current U.S. epidemic in obesity at the population level. Individuals differ considerably in the risk of obesity, however, because they are exposed to different sets of genetic and environmental factors. This evolutionary perspective is a helpful way to interpret research on genes and the life course, because it frames the narrative on the origin of a genetic effect.

The effect of genes on complex phenotypes, such as behaviors, has been explored in a number of ways that have evolved as scholars' understanding of biology has increased. Studies on twins and adopted children allowed researchers to explore the heritability (i.e., the degree to

which a characteristic is passed from parents to children via genes) of behaviors using known levels of genetic similarity between individuals to disentangle genetic and social effects. For example, in twin studies, differences between pairs of identical (monozygotic) twins and fraternal (dizygotic) twins are compared; because the identical twins are known to share the same genetic material, smaller average differences in behavior between identical twins than fraternal twins suggest that the behavior is influenced by genetics. In adoption studies, adopted siblings are biologically unrelated to any others raised in the same household, so the effect of the family social environment can be observed by comparing the extent to which adopted siblings resemble others raised in the same family. These models do not isolate any particular gene responsible or associated with behaviors; they simply indicate that there is a genetic component to the observed behaviors.

With advances in genetic technology, more sophisticated methods have become available to researchers. Clinical research using animals enables researchers to ascertain the effects of specific genes. The biochemical effects of these genes can be determined, so researchers are able to observe what the genes do and what the consequences of their actions might be. Drawing upon results of these animal experiments to identify genes that may affect some outcome, scientists can then collect both social and genetic data from humans, which allow them to test for associations between these candidate genes and behaviors. Most recently, the development of genome wide association scans has allowed scientists to use large amounts of information from points along the entire genome in order to examine genetic bases of disease and behaviors.

## GENETIC INFLUENCES ON THE ADULT LIFE COURSE

Genes play a part in several aspects of the adult life course, including physical and mental health, fertility, and criminal behavior. However, individuals' statuses and trajectories at the start of adulthood are shaped by a vast array of influences, including genetic influences, experienced at younger ages. Thus genes also have an impact on the adult life course through their effects on development during youth and adolescence. Genetic influences highlight the long-term, cumulative view of life events and processes inherent to the life course perspective.

Evidence suggests that genetics shape health during adulthood. The most obvious cases are genetic diseases such as Huntington's disease, sickle-cell anemia, and hemophilia. These diseases are Mendelian in nature; that is, there is a simple, almost deterministic relationship between a certain genotype and having the disease. However, most diseases are complex and involve a number of genes and nongenetic factors. For example, in most cases, obesity is not caused by a single gene. Rather, many genes and a large number of factors related to dietary patterns, exercise, and other health behaviors appear to be involved. Using several large genome wide association studies, work has produced evidence that the FTO gene is associated with an individual's propensity to obesity (Frayling et al., 2007). As alluded to earlier, a genome wide association study is a method used to identify genes involved in human disease by searching the genome for small variations that occur more frequently in people with a particular disease than in people without the disease. The data is then used to pinpoint genes that may contribute to a person's risk of developing various diseases.

Genes also are implicated in alcohol use (Nurnberger & Bierut, 2007). Facial flushing, drowsiness, and other unpleasant symptoms from even light alcohol use are observed much more frequently among East Asians than Europeans. Such symptoms mainly occur to those possessing the ALDH2*2 allele, which is prevalent in East Asians and encodes inactive forms of the ALDH2 gene. ALDH2. Research also shows that the presence of the ADH2*2 allele, which is also more prevalent in East Asians and encodes superactive forms of ADH2, can trigger the responses. Probably because of the unpleasant flushing responses, the ALDH2*2 and ADH2*2 alleles tend to protect those who possess the alleles from developing alcoholism. GABA-A receptors are believed to be involved in alcoholism. Studies suggest that the GABRA2 gene is associated with alcohol dependence (Soyka, Preuss, Hesselbrock et al., 2008).

Reproductive behavior, whether a person has children and, if so, when they have their first and how many they ultimately have, is another area of adult life that appears to have a genetic basis. In addition to fecundity, the biological ability to have children, there are a number of crucial steps that lead to childbearing, each of which could also be influenced by genetic factors. Age of sexual debut has been shown to be related to the dopamine D4 receptor gene (DRD4), a gene that has been hypothesized to be related to risk-taking behavior (Guo & Tong, 2006). Another important component of reproductive behavior, a person's number of sexual partners, has been found to be related to the DAT1 gene among males (Guo et al., 2007).

Preliminary work suggests that a number of genes (DAT1, DRD2, and MAOA) are associated with involvement in delinquent and criminal acts during adolescence and early adulthood (Guo, Ou, Roettger et al., 2008). However, even if a gene does have an effect on a

human outcome, the effect is almost never deterministic. Typically, it increases or decreases the probability of an outcome by a moderate amount just like a nongenetic factor. Sometimes, the effect of a gene depends on environmental factors. Avshalom Caspi and colleagues (2002) investigated the role of genotype in violent behavior among individuals who were maltreated in childhood. Males who were maltreated early in life are at risk of becoming violent offenders, but not all males respond to maltreatment in the same way. The study found that a functional polymorphism in the gene encoding the neurotransmitter-metabolizing enzyme monoamine oxidase A (MAOA) modifies the effect of maltreatment. Only maltreated children with a genotype generating low levels of MAOA expression tended to develop the violent behavior problem.

The above examples highlight some specific areas in which researchers are working to untangle the connections among adult outcomes, genes, and social circumstances. However, there are other possible ways to look at the effects of genes on the adult life course. Genetic effects are not necessarily static, as the effects of genes are known to vary across the life course. Because most genes have a number of consequences, a phenomenon called pleiotropy, which aspect of their work that is important can change over time. For example, a gene called p53 suppresses cancer by limiting the proliferation of stem cells (Rodier et al., 2007). Early in life, the consequences of this gene are helpful—a reduced likelihood of developing cancer. However, as the individual ages, the consequence of suppressing the growth of stem cells is a more rapid aging process.

Changes in social environments over the life course also may lead to temporal variation in the effects of genes on behavior. Over time, an individual is exposed to different circumstances, as a result of their age, historical forces, or a combination of the two. These circumstances can alter the way in which genes are expressed. For example, while there appear to be genes associated with drinking behavior, the importance of these genes varies with life course stage. During adolescence, when the individual is subject to strong peer influences about drinking, there is little genetic association between genes and drinking behavior. But later in life, peer group influences are no longer the dominant force in the person's life and the genes become an important predictor of alcohol use (Guo et al., 2007).

## FUTURE DIRECTIONS FOR RESEARCH

This entry has examined a number of paths by which genes could affect the life of an individual, and it may seem that scientists are beginning to understand how genes affect the adult life course. However, current understanding is limited by a number of methodological and conceptual concerns.

First, the relationship between genes and behavior is complex. Some of the relationships between genes and behavior discussed above were direct (e.g., a gene variant raises or lowers the probability of having a disease), whereas others were moderated (e.g., a gene product leads to a particular outcome only under certain circumstances, as in Caspi et al. [2002] about maltreated children.). When the circumstances under which a gene leads to a particular outcome are external to the individual, this situation is referred to as a gene-environment interaction. An example is the case of phenylketonuria (PKU), a condition that develops when individuals born with specific genetic markers are exposed to phenylalanine (an amino acid) in their diet (Khoury, Adams & Flanders, 1988). In a gene-environment interaction, the environment may influence how sensitive individuals are to the effects of a genotype and vice versa (Hunter, 2005). The existence of such complicated interactions makes understanding the effects of genes even more difficult for researchers.

Second, researchers lack the data necessary to research the links among genes, environment, and behavior. To unpack all of the complexity of genes and environments, large-scale collection of both social and genetic information is needed. Because certain genotypes are exceedingly rare, large samples are necessary to analyze their effects. To date, no study has been sufficiently large and detailed to truly capture the nuances of genes and environments. Even with such a data set, methodological issues arise, as the sheer volume of information makes the possibility of false positive results very real.

Third, the outcomes that have been studied thus far are limited in scope; there is room to explore what these genetic factors might mean for career and marriage trajectories, for example. However, with complicated outcomes, more genes and environmental factors will be involved. Thus career trajectories will be much more difficult to study than the trajectory of a person's blood pressure. In addition, research thus far has also examined only a small number of candidate genes. Because researchers rely on previous work to establish a plausible mechanism by which a gene leads to behavioral differences, this gap in knowledge has limited the avenues of exploration. Thus further study is needed on the biological effects of genes and how these effects then translate into observed behaviors.

Finally, the adult years represent the longest span of the life course, yet it remains one of the most understudied areas with regards to genetics and their effects on

the life trajectories of individuals. Further research in this area is critical.

While a number of paths are open to future research, there are also a number of ethical, legal, and social issues related to genetic research. The implications of understanding an individual's genetic inheritance and the consequences of what that knowledge can shed light on about the person and their life are immense. An obvious example is the effect on insurance and access to health care, should genetic predispositions be known—a concern that drove the passage of the Genetic Information Nondiscrimination Act of 2008, which protects Americans against discrimination based on their genetic information. For example, this Act prohibits health insurers from denying coverage to healthy individuals who may be predisposed to developing certain illnesses in the future and also bars employers from factoring in a person's genetic makeup into hiring, firing, and promotion decisions. At the same time, within the medical community there has been a persistent hope that, with knowledge of a person's genome, medicine might be personally tailored in order to more accurately and safely deal with health problems (Guttmacher & Collins, 2005).

More attention is needed to the ways in which information about individuals is safeguarded to protect the individual. In addition, genetic testing reveals information not just about an individual, but also about his or her family. For example, if a young person was tested and found positive for Huntington's disease, the test result would also provide disease information on his or her siblings. With the current medical and scientific system built on informed consent, how does one deal with the fact that by testing an individual, you indirectly test family members, who may not have consented to having their genes tested?

Knowledge of a link between genes and behaviors could lead to targeted social programs. Given the policy necessity of targeting resources where the leverage is greatest, this could mean that an individual could warrant intervention on the basis of genetic heritage, even when others in similar social situations may not. Most fundamentally, as it is learned how genes influence the way in which people live their lives, people have to ask what it means to be "created equal" if there are inherent differences in people that cannot necessarily be overcome by environment or conscious effort.

**SEE ALSO** Volume 1: *Genetic Influences, Early Life;* Volume 3: *Genetic Influences, Later Life.*

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***Guang Guo***
***Brandon Wagner***

# GIDDENS, ANTHONY

***(1938–)***

Born in London, Anthony Giddens is a social theorist with an international reputation. In 1985 he was awarded a professorship from Cambridge University and later became the director of the London School of Economics (1997–2003). He was the cofounder of Polity Press, which is now one of the world's foremost publishing companies for the social sciences and humanities. In

***Anthony Giddens.*** JASON BYE/AFP/GETTY IMAGES.

1999 he was invited to present the British Broadcasting Corporations (BBC) Reith Lectures, which he subsequently published in *Runaway World* (1999). He became a member of the House of Lords in 2004. Over the course of his career, he has been awarded 15 honorary degrees. He continues to add to his substantial body of academic writing, which includes more than 40 books. His work has been translated into more than 40 languages.

The theme in much of Giddens's writing is the tension between structure and agency, which culminated in the development of *structuration theory*. This theory was developed incrementally in Giddens's writings that distinguished it from other theoretical approaches such as positivism, interpretivism, structuralism, and functionalism. Giddens (1984) presented a summary in *The Constitution of Society: Outline of the Theory of Structuration*. He proposed that structures consisted of rules and resources, which the agent uses to reproduce social life. *Agency* refers to the ways in which individuals continually monitor, rationalize, and create their social world. Structuration theory moves beyond the polarized positions held by objectivist and subjectivist approaches to understanding the social world and provides a new way of understanding the basic elements of social reality. It describes the production and reproduction of social structures through social practices across time and space, reconceptualizing structure and agency as a duality. For Giddens, structures do not have an independent existence outside of the individual but are always partially internal to the agent, mediated by experience, and continuously produced and reproduced through social interaction.

Giddens's later work applied structuration to the way in which large-scale historical forces such as globalization, modernity, and politics shaped the perceptions and experiences of individuals, with particular emphasis on the implications for self and identity. In *Modernity and Self-Identity* Giddens (2001) claimed that "modernity radically alters the nature of day-to-day social life and affects the most personal aspects of our experience" (p. 1). The primary characteristics of late modernity that Giddens observes include increasing technological advances, multiplicity of choice, a decline in traditions, and a reorganization of time and space as systemic social activities are "lifted out" from localized contexts. The centrality of experts and symbols in the coordination of social relations, in a way that is disembedded from traditional communal ties, radically alters the nature of experience.

Despite the advances of late modernity, Giddens does not consider these features of modernity as signs of increasing order and stability. Conversely, he views them as responsible for an increasing sense of living in an out of control or runaway world. Late modernity's attempt to gain control and mastery over the external environment relies on individuals' reflexivity and their knowledge of their social world; however, knowledge is itself constantly questioned and potentially revisable. The consequent existential experience of anxiety, uncertainty, and risk, Giddens argued, is also evident in people's relationship with their own bodies and identities. One can see this in the increased significance, prominence, and preoccupation with the body, particularly in regards to its appearance and performance.

Furthermore, anxieties emerging from a perception of increased risk have become a particular feature of late modernity, related to associated declines in tradition, increases in choice, and subsequent self-awareness and reflexivity of lifestyles. Reflexivity involves individuals' ability to rationalize and reason about their actions. Allied to this, Giddens (2001) suggested that lifestyles consisting of the repetition of taken-for-granted practices, serve to maintain a sense of *ontological security*. This psychological mechanism of ontological security plays a fundamental role in creating a "protective cocoon" (p. 3) from existential anxieties threatening the individual's self-identity and the effective functioning of society in general.

In *The Transformation of Intimacy,* Giddens (1992) applied the concepts of choice, control, and self-identity in modernity to the arena of intimate relationships. In conceptualising what he called "the pure relationship," Giddens contended that intimacy, like self-identity, is a reflexive practice no longer defined by tradition and that "plastic sexuality" represents the emancipation of sexual expression from the traditional reproductive constraints. This has led to a restructuring and democratization of intimate relationships, which increasingly become mechanisms for exploration of self-identity. Moreover, changes in intimacy also reflect the increasing uncertainty, risk, and meaning creation in late modernity.

Research and theory on the life course have been significantly influenced by Giddens's contributions. In particular, lifestyle projects involving self-actualization have a major impact on the way individuals subjectively experience aging, the choices they are faced with as they age, and the intimate relationships they encounter. In navigating the life course, the individual is increasingly exposed to a multiplicity of choice about the cultivation and reconstruction of the body and self-identity. The resulting ethical dilemmas are the grounds for a new life politics about how people should live in a post-traditional order.

**SEE ALSO** Volume 1: *Agency;* Volume 2: *Sociological Theories.*

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***Bethany Morgan***

# GLOBALIZATION

Globalization has become a central point of reference for the media, politicians, academics, and policy makers to understand social change. Life course studies therefore increasingly focus on the impact of globalization on life courses in various modern societies.

The term *globalization* summarizes four interrelated structural shifts (Blossfeld, Mills, Klijzing, & Kurz, 2005): (a) the swift internationalization of markets after the fall of the Iron Curtain (which divided Europe into two separate areas from the end of World War II until the end of the 1980s) at the end of the Cold War and the growing integration of cheap manufacturers in eastern Europe, China, and India into the world economy; (b) the rapid intensification of tax competition among nation-states, forcing them to introduce labor and welfare state reforms (such as deregulation, privatization, and liberalization); (c) the accelerated diffusion of knowledge and the spread of networks that are connecting global markets and decision-makers via new information and communication technologies (ICTs); and, (d) the rising vulnerability of local markets because of their dependence on random shocks—such as scientific discoveries, political upsets such as wars and revolutions, economic crises, or price shocks—occurring elsewhere on the globe.

Together these changes are generating an unprecedented level of global competition with resulting structurally based uncertainty for individual actors. In short, globalization is making life courses more insecure. For example, layoffs have become increasingly socially acceptable in the corporate world. Major companies have used the threat of relocating jobs to other locations or countries as a way to secure pay and benefit cuts. Weak unions have little choice but to accept wage cuts or else lose jobs by the thousands. Thus falling wages, reduced benefits, and rising job insecurity seem to be increasingly entrenched features of the new uncertain life courses across most of Western Europe, the United States, and other parts of the developed world. In addition, unemployment and the number of insecure freelance positions are rising while stable jobs with good benefits are being cut. Large numbers of laid-off workers do not get their old jobs back; instead, they are having to look for new work, often in entirely new fields. Those who still have jobs are working longer hours with little prospect of meaningful raises.

Although there is increasing uncertainty in the economic and social spheres of advanced economies, it does not affect all individuals and social groups to the same extent. There are institutional settings and social structures that determine the degree to which people are affected by rising uncertainty (see Figure 1).

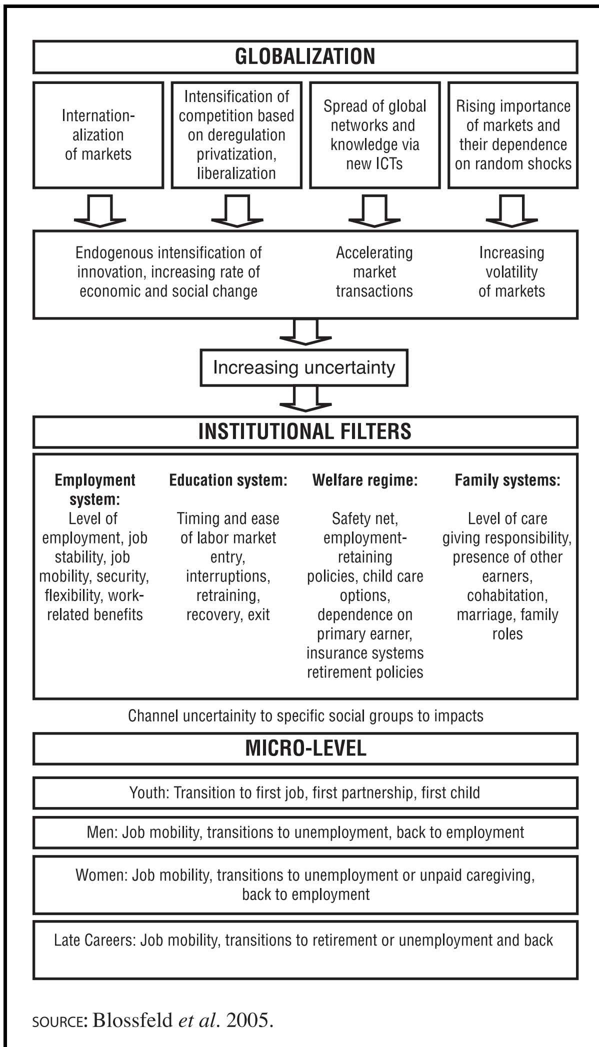


***Figure 1.*** *How globalization creates increasing uncertainty, is filtered by domestic institutions, and impacts life course transitions.* CENGAGE LEARNING, GALE.

## FORCES UNDERLYING GLOBALIZATION

The concept of globalization used here summarizes four interrelated structural forces (see Figure 1). First, globalization refers to the internationalization of markets and subsequent decline of national borders. This is connected with changes in laws, institutions, and practices that make various transactions (in commodities, labor, services, and capital) easier or less expensive across national borders. Taxes on imports, for instance, have been greatly reduced under the General Agreement on Tariffs and Trade (GATT), between member states in the European Union (EU), and via the North American Free Trade Agreement (NAFTA). Capital flows are facilitated by new political agreements. In economic terms, the internationalization of markets is particularly reflected in the rising number of firms conducting business in more than one country, through the presence of multinational corporations (MNCs) and foreign direct investment (FDI). In fact, MNCs are a driving force of the globalization of production and markets because they account for around two-thirds of world trade, 20% of the world's total amount of goods and services, and play a primary role in the diffusion of technology. However, increasingly small and medium-size businesses are also expected to take advantage of cheaper labor in eastern European or Asian countries.

Second, globalization relates to the intensification of competition among nation-states (i.e., the notion that capital and labor, but capital in particular, is increasingly mobile and forcing national economies to compete in attracting global money). Governments are reducing taxes for companies and introducing policy measures designed to improve the functioning of markets, such as the removal or relaxation of government regulation of economic activities (deregulation). Governments are also shifting their policies toward relying more on markets to coordinate economic activities (liberalization), and to transfer the control of assets or enterprises to private ownership that were previously under public ownership (privatization).

A third feature of globalization is the spread of global networks of people and firms linked by ICTs, such as microcomputers and the Internet. These ICTs, together with modern mass media, transmit messages and images instantaneously from the largest city to the smallest village on every continent and allow a faster diffusion of information and knowledge over long distances (Castells, 1996). They increasingly allow people to share information and to connect and create an instant common worldwide standard of comparison. Modern ICTs influence communications between individuals, organizations, and communities by effectively rendering physical space and distance irrelevant. Thus, although the introduction of technology is not unique in itself, recent ICTs have fundamentally altered the scope, intensity, velocity, and impact of technological transformations.

Finally, due to the intensification of competition, globalization also increases the relevance of markets in the coordination of decisions in all modern societies. These developments inherently strengthen the worldwide interdependence of decision-making. As a consequence, market prices and their changes increasingly convey information about the global demand for various goods, services, and assets, and the worldwide relative costs of producing and offering them. These prices increasingly set the standards to which individuals, firms, and nation-states then try to comply. However, globalization does

not only mean that actors are increasingly in the hands of anonymous global markets. What is equally important is that the changes in these markets are becoming more dynamic and less predictable. First, the globalization of markets intensifies competition between firms, forcing them to be innovative, to use new technological developments, or to invent new products. This in turn increases the instability of markets.

Second, modern ICTs and deregulation and liberalization measures allow individuals, firms, and governments to react faster to observed market changes and simultaneously accelerate market transactions. This in turn makes long-term developments of globalizing markets inherently harder to predict. Third, global prices tend to become more liable to fluctuations because worldwide supply, demand, or both are getting increasingly dependent on *random shocks* caused somewhere on the globe. Random shocks may include wide-ranging occurrences, such as major scientific discoveries, technical inventions, new consumer fashions, major political upsets such as wars and revolutions, or economic upsets. The accelerated market dynamics and the rising dependence of prices on random events happening somewhere on the globe produce a higher frequency of surprises. In other words, the increasing dynamics and volatility of outcomes of globalizing markets makes it more difficult for individuals, firms, and governments to predict the future of the market and to make choices between different alternatives and strategies.

## GLOBALIZATION AND DOMESTIC INSTITUTIONAL FILTERS

Increasing uncertainty is not the most important consideration when studying the consequences of globalization for life courses; rather, it is how rising uncertainty is "institutionally filtered" and channeled toward specific social groups in various countries (Blossfeld et al., 2005). Increasing uncertainty does not affect all regions, states, organizations, or individuals in the same way. There are institutional settings and social structures, historically grown and country-specific, which determine the degree to which people are affected by rising uncertainty (see Figure 1). These institutions have a tendency to persist and act as a sort of intervening variable between global macro forces and the responses at the micro level (Nelson, 1995).

Some have argued that globalization undermines the authority or even heralds the fall of the nation-state. However, new research clearly demonstrates that the nation-state and, in particular, institutions that shape life courses do not lose their significance, but generate country-specific problems that call for country-specific solutions and transformations. Thus, one cannot expect that increasing uncertainty leads to a rapid convergence of life courses across all modern societies, as claimed, for example, by neo-institutionalists (social scientists who discuss the way modern societies interact and influence each other, e.g., Meyer, Ramirez, & Soysal, 1992) or the proponents of the modernization hypothesis (who describe the mechanisms which contribute to the social progress of modern societies, e.g., Treiman, 1970). Rather, life course research shows that there are unique developments within countries. The institutions that most impact life courses are employment relations, educational systems, national welfare state regimes, and family traditions.

## GLOBALIZATION, INCREASING UNCERTAINTY, AND LIFE COURSE DECISIONS

Many decisions in the life course have long-term implications. People choose educational and professional tracks, enter and exit job careers, and make long-term binding family decisions. However, higher levels of uncertainty due to globalization generate insecurity and potential conflict and make it increasingly difficult for individuals to make such choices in ways that maximize their best interest and the best interest of their families. A central issue in modern life course research is therefore to understand how people make life course decisions under conditions of increasing uncertainty. For example, it is important to understand how individuals cope with growing uncertainty in their everyday life and the extent to which their (long-term) decisions are shaped by a specific local social context. As Mario Regini (2000) states: "The institutional context, in fact, provides actors with a set of resources and constraints that they must necessarily take into account when choosing among different alternatives and consequently shapes their actions" (p. 8).

## SOME RESULTS FROM THE GLOBALIFE PROJECT

The Globalife project is the first international comparative research project to study the impact of globalization on individual life courses in 23 European and North American societies. It is organized into four volumes that cover the transition from youth into adulthood (Blossfeld et al., 2005), mid-career changes for both men (Blossfeld, Mills, & Bernardi, 2006) and women (Blossfeld & Hofmeister, 2006), and the transition from employment to retirement (Blossfeld, Buchholz, & Hofäcker, 2006) (see Figure 1).

First, this research shows that globalization has influenced young people's ability to establish themselves as independent adults in the workforce, to form romantic partnerships, and to become parents (Blossfeld et al.,

2005). Youth in all studied countries were exposed to dramatically increasing uncertainty at labor market entry in the form of more precarious, lower quality employment (e.g., fixed term contracts, part-time work, lower occupational standing, freelancing, and lower wages). This study also shows that nation-specific institutions clearly shield or funnel uncertainty in unique ways to particular groups of youths. For example, in Italy precarious forms of self-employment among young people have been rising dramatically, or in Spain and Germany the proportion of fixed-term employed young people has been exploding.

The experience of uncertainty is therefore quite unequal among young people, with risk disproportionately accumulating among those in lower-skilled occupations that require little education. There were also clear implications of uncertainty for family formation. Economic, temporal, and employment uncertainties translate into a higher likelihood of postponing or forgoing partnership and parenthood. Thus, globalization contributes to marriage and fertility declines.

Second, Globalife research demonstrates that men in the middle of their careers in countries such as the United Kingdom and the United States, where the labor market is highly deregulated, are also strongly affected by globalization (Blossfeld, Mills, & Bernardi, 2006). In contrast, midlife men in Sweden, Germany, Italy, Denmark, and to a lesser extent Spain and the Netherlands, were more insulated from the negative impacts of globalization. These so-called insider-outsider countries have a history of centralized wage bargaining and restrictions on businesses that mainly protect mid-career men.

Third, Globalife findings demonstrate that globalization has mixed implications for women's employment, largely depending on the welfare state and the country-specific employment regime (Blossfeld & Hofmeister, 2006). In some countries, such as in Germany and the Netherlands, globalization fosters women's employment by allowing more women to (re)enter the labor market than in the past. In these countries, more flexible jobs bring a large group of midlife women into the labor market who previously had no or only marginal difficulty reconciling paid work with unpaid care duties. Yet in other countries that already have achieved higher levels of women's full-time secure employment (e.g., the United States or the Scandinavian countries), employment restructuring due to globalization has the potential to jeopardize that security.

Finally, the Globalife project reveals that older workers are particularly vulnerable in globalized societies because the new type of knowledge-based work in globalized countries puts a huge premium on innovation speed as well as on new technology. New technology and outsourcing renders many established job positions obsolete, in particular the unskilled ones. However, an employer's willingness to invest in retraining older employees is often low because these employees are generally expected to leave the company soon, either due to retirement or poor health. The Globalife project demonstrates great cross-country differences for older workers. In neoliberal countries such as the United Kingdom or the United States, low levels of employment protection foster a relatively high level of labor market mobility among older workers. Low levels of income security provided through public pensions leads to continuous employment even beyond the formal retirement age. In social-democratic countries such as Sweden or Denmark, labor market policies and high emphasis on continuous lifetime education foster older workers' connection to the labor market, while pension systems, to some extent, allow work patterns to remain more flexible. Finally, in conservative and southern European countries, there are relatively high rates of labor market exits through early retirement.

Because of relatively regulated employment relations systems, economic restructuring of work can hardly be achieved by dismissing workers (the so-called insiders). In addition, rigid labor market boundaries created by standardized occupational systems, as in the case of Germany, do not allow the older workforce to move to other jobs easily. In these so-called insider-outsider countries, pension systems therefore provide incentives for an early retirement.

## UNRESOLVED ISSUES REGARDING GLOBALIZATION AND THE LIFE COURSE

Globalization is critical to understanding changes in life courses in modern societies. It forces researchers to develop a multilevel conception that links global transformation to impacts at the institutional and individual level. Different experiences and behaviors in these countries led to several interesting findings in the Globalife study. However, one must concede that life course research that incorporates global changes into its analysis is only just beginning. Much more empirical research is necessary because of the complexity of causal mechanisms that work their way through institutions and labor markets to the individual level. However, the results of the Globalife project stimulate discussion, modifications, and new approaches to study these complex and drastic transformations of modern societies. In particular, more life course research in non-Western nations such as India and China would be necessary in the future. Little is known about the life courses of individuals outside the developed world; in addition to having an impact on the life

course in developed nations, globalization highlights the importance of considering the contours of life courses throughout the world.

**SEE ALSO** Volume 2: *Economic Restructuring; Income Inequality; Individuation/Standardization Debate; Occupations; Policy, Employment.*

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***Hans-Peter Blossfeld***

# H

## HEALTH BEHAVIORS, ADULTHOOD

There is growing recognition that the U.S. population is well below the level of health possible given the advanced state of U.S. medical technology. This gap is attributed in part to individual behaviors that contribute to a relatively high population-level risk of disease and ill health (McGinnis, Williams-Russo, & Knickman, 2002). Certain health behaviors may contribute to increases in various cancers, stroke, heart disease, and functional impairment. The two most important negative behaviors for adult health are smoking, which is declining over time, and obesity, which is on the rise. A key positive health behavior is regular exercise. Other important behaviors include diet (as related to body weight) and drinking. In addition, research indicates that health behaviors are interrelated and in particular that negative health behaviors cluster together. For example, individuals who are more sedentary are also more likely to engage in other less healthy behaviors such as smoking (Carlsson, Andersson, Wolk, & Ahlbom, 2006). With adjustments in health policy and medical and educational interventions, these behaviors may be changed to improve health and reduce medical costs.

### HEALTH BEHAVIORS AND THE LIFE COURSE

The cumulative impact of lifelong health behaviors on adult health is well established. Many health conditions and mortality in late-middle adulthood are thought to be at least partially the result of the cumulative impact of poor health behaviors (excessively drinking alcoholic beverages, smoking, sedentary lifestyle, high-fat diet, etc.). Many argue that this connection between negative health behaviors and poor health is also true for older adults. Others argue, however, that poor health and old age mortality are unaffected by current or future health behaviors. In this view, once a person has reached old age, poor health behaviors have little bearing on overall health and mortality. Individuals who have survived despite engaging in poor health behaviors are especially robust or physically strong and resilient. It is likely that both of these scenarios are true, with the latter argument true for only a small fraction of the population.

Health behaviors can be shaped by major life course events. For example, as with many other major historical events, the effects of the Great Depression were felt long after the economy rebounded. Elder (1974) notes that the economic hardship experienced during the Depression "had enduring consequences for life course and values" (p. 3). In particular, those who grew up during this time of uncertainty and deprivation placed high value on the stability of the family as they became spouses and parents. Aside from influencing values about the family, constrained family finances and societal resources not only contributed to poor nutrition during this period but also may have shaped long-term values attached to food and weight management. Research suggests that poor prenatal care or poor childhood nutrition and health conditions may have negative effects on health in adulthood (Johnston, 1985), in particular increased risks of chronic diseases such as coronary heart disease, diabetes, hypertension, and stroke. This negative health impact may have been countered somewhat to the extent that experiencing the Depression led to moderate ideas about food intake and thus better weight management.

Other major life events also impact health behaviors; for example, marriage may have a beneficial effect in smoking cessation (Franks, Pienta, & Wray, 2002).

## HEALTH BELIEF MODEL

The Health Belief Model (Becker, 1974; Rosenstock, 1974) provides a framework for understanding why some individuals participate in positive health behaviors (healthy diet, moderate alcohol consumption, exercising, and abstaining from smoking) and others do not. A premise of the model is that individuals' decisions to engage in positive health behaviors (or to change their health behaviors) are based on their evaluation of the possible threat posed by a health condition and the perceived benefits and barriers of taking action to prevent getting the health condition. Two factors influence an individual's assessment of the potential threat posed by a health problem: the perceived seriousness of the problem and the perceived susceptibility to it. In the perceived seriousness dimension, the individual considers the potential social, psychological, and physiological ramifications of the problem if left untreated. The greater the perceived severity, the more likely they are to take preventative action. Concerning perceived susceptibility, an individual evaluates the chances of developing the health problem. The greater the perceived susceptibility, the more likely they are to take preventative action. Factors influencing the assessed benefits of taking action include reducing the risk of experiencing negative effects associated with the disease and of contracting the disease, while the perceived barriers include lack of time or resources.

If the sum of the potential threats outweighs the sum of the benefits and barriers to taking action, positive health behavior is likely (Glanz & Rimer, 1997). From this perspective, research on health in adulthood should focus on identifying interventions effective in enhancing perceived benefits and reducing perceived barriers to healthy behaviors. Understanding these determinants has the potential not only to increase the well-being of the adult population but also to decrease the societal costs associated with poor health in this population.

## DIET AND BODY WEIGHT

Diet is defined as the quantity and quality of food consumed by an individual. A common way to assess healthy body weight (in part the result of diet) is the body mass index (BMI), an index of the relationship of body weight to height, calculated as weight in kilograms divided by height in meters squared. BMI may be assessed using self-reports of height and weight or by taking physical measurements. The National Heart, Lung, and Blood Institute (NHLBI) has developed a BMI classification scheme commonly used by medical practitioners for the clinical assessment and treatment of problems associated with body weight: underweight = BMI $< 18.5$; normal weight = BMI 18.5 to 24.9; overweight = BMI 25.0 to 29.9; and obese = BMI 30.0 and over (NHLBI, 1998). Where body fat is stored on the body is also an important predictor of disease and poor health. The waist to hip ratio is a way to assess healthy body fat and can be defined as the ratio of the distance around the waist to that of the hips.

Although BMI is widely used as a measure of obesity and underweight, it is not a perfect measure. First, although self-reported measures of height and weight are considered legitimate ways of defining body weight, they may also result in underestimating BMI because people of short stature tend to overreport height and heavy individuals tend to underreport their weight (Black, Taylor, & Coster, 1998; Kuskowska-Wolk, Bergström, & Boström, 1992). Therefore, self-reported measurements may produce conservative estimates of how obese a society may be. Second, BMI is a measure of excess body weight rather than excess body fat. Because body composition varies with age, race, and gender, people at the same BMI do not necessarily have the same percentage of body fat or the same risk for adverse outcomes (Flegal, 2000). Third, BMI does not indicate how weight is distributed over the body, which may also be an important and independent health risk. For example, previous research suggests that older women with a low BMI but a high waist–hip ratio (abdominal obesity) have a higher risk of death than heavier women who have a lower waist–hip ratio (Folsom et al., 2000).

**Rationale for the Study of Diet and Body Weight in Adulthood** Social science research on the effects of body weight and health among adults has flourished since the late 1990s. An important health trend has spurred research in this period: Average body weight in the United States has significantly increased over time (He & Baker, 2004), and obesity has become a growing and costly problem. Obese adults have a twofold increase in disease conditions. Disease conditions more prevalent among obese adults include heart disease, diabetes, and certain types of cancers. These national increases in body weight, obesity, and obesity-related health problems likely contribute to elevated medical care costs. One study found that an individual's health care costs are 44% higher when they are obese (Sturm, Ringel, & Andreyeva, 2004). Thus, learning more about body weight, particularly excess weight, could be fruitful in improving quality of life and reducing medical costs among adults.

**Life Course Patterns in Weight** Individuals tend to gain weight through middle adulthood into early old age and then plateau or decline in weight at very advanced ages,

perhaps as a result of disease (Jenkins, Fultz, Fonda, & Wray, 2003). This suggests that middle age is a time of life in which weight management is particularly important to overall health, and especially to health concerns associated with excess weight. In contrast, older age is often marked by weight loss—suggesting a morbid weight loss sometimes related to disease.

**Patterns by Sociodemographic Characteristics** Body weight in adulthood differs substantially by social and demographic characteristics such as race and ethnicity, gender, and socioeconomic status. A review of studies on body weight patterns among African Americans, Mexican Americans, and other Hispanic groups (versus White Americans) indicates that White men and women have lower average body weight than other racial and ethnic groups, but they tend to gain more weight over their lives. In terms of gender, women tend to gain more weight over the life course than do men (He & Baker, 2004). Although on average women's BMI is lower than men's, at the 75th percentile and above of the BMI distribution, women have higher BMIs than men (Williamson, 1993). That is, the prevalence of BMI >= 25 is higher for men than for women, whereas the prevalence of BMI >= 30 is higher for women than for men (Flegal, 2000). That BMI varies by race and ethnicity more so for women than for men suggests a stronger association between weight and women's social and cultural roles. Where body fat is typically stored can also vary by certain socioeconomic characteristics such as gender (Flegal, 2000). For example, men tend to carry their weight around their abdomen and women on their hips and thighs.

Socioeconomic factors play a role in body weight, with the incidence of excess weight and obesity generally higher among those with lower education levels and incomes. The educational differential in obesity tends to be highest among young adults and varies by race at older ages. For example, while obesity is more prevalent among older White Americans with lower education, it does not vary systematically by education among older African Americans. Current older cohorts of African-American adults are in general more poorly educated than upcoming cohorts. Because there is little variability in education among current cohorts, the lack of variability in level of education makes it difficult to see changes in obesity by one's education level (Himes, 1999).

Work transitions in adulthood can contribute to a reduction in economic status, resulting in larger weight disparities in adulthood than in other phases in life. Conversely, excess weight related to health declines, which is more common in adulthood, may contribute to the inability to work, resulting in larger economic effects in adulthood than in childhood or retirement. In other words, body weight may be an important predictor of economic advantage or disadvantage in adults, yet these patterns may vary by gender. For older men, obesity may be related to higher socioeconomic status (Fonda, Fultz, Jenkins, Wheeler, & Wray, 2004). Among more recent cohorts of adults, excess weight among men may be a sign of success or a strong work ethic that could provide them with more resources or opportunities (e.g., higher paying jobs).

In sum, excess body weight, a growing concern in the U.S. population, varies by race, gender, age, and education level, with obesity being more common among some subgroups of non-White persons, women, middle-age adults, and the less educated. In addition, sociocultural groups have differing norms about healthy body weights (Chang & Christakis, 2001), and body composition itself suggests the need for varying interpretations of excess weight. To be effective, programs for prevention and treatment of obesity must take into account these differences in developing and targeting interventions (NHLBI, 1998).

**Patterns in Diet and Body Weight Internationally** Differences exist between lower and higher income countries in the factors associated with body weight. In the United States, lower socioeconomic status is associated with higher BMI, especially among women. In many lower and middle-income countries, the opposite relationship is observed. In these nations, economic development has been accompanied by a transition to a diet high in red meat, saturated fat, sugar, and refined foods—and low in fiber—essentially the "Western diet." This dietary shift emerged after 1950 in East Asia, where an epidemic in excess body weight is starting to emerge. In a lower income country, expanding people's access to money and Western food may actually boost average BMI. For example, in urban India, the affluent are adopting Western dietary patterns and consuming larger quantities of fats, oils, and sugars than are the poor (Chatterjee, 2002). With this nutrition transition (Popkin, 2004) taking hold in lower and middle-income countries, the poorer populations continue to be the most underweight, whereas the affluent have a growing incidence of excess body weight.

**The Relationship of Body Weight with Disease, Functional Impairment, and Mortality** Both too-low and too-high BMI are associated with health problems that can decrease longevity and quality of life. A too-low BMI (commonly defined as a BMI of less than 18.5) has been suggested as one indicator, along with muscle weakness (Shlipak et al., 2004) and improper immune function (Walston & Fried, 1999), of frailty (Fried et al., 2001), a condition characterized by wasting and a decrease in the

body's reserves. Past research indicates that frailty may be a predictor of inability to perform common daily activities such as bathing, eating, and dressing.

Body weight, along with its association with disease, can also affect one's ability to perform basic tasks. Being obese or having a too-high BMI is a contributing factor to a number of chronic medical conditions (Jenkins, 2004) such as hypertension, heart disease, diabetes, stroke, arthritis, and urinary incontinence. Side effects and symptoms of these obesity-related diseases and conditions may themselves contribute to difficulties in doing such things as walking up stairs or getting up from a chair (Himes, 1999; Jenkins, 2004). Being underweight, however, may suggest a concealed disease that would subsequently lead to the diagnosis of a health condition (such as cancer) at a more advanced stage. Side effects and symptoms of certain health conditions can ultimately contribute to impairments.

Even though adults at either extreme in body weight are more likely to have one or more chronic diseases, the same relationship does not hold true for mortality. Individuals who are underweight in middle age and older adulthood are more likely to die than older adults of normal weight. Overweight and obese middle-aged adults are more likely to die than their normal weight counterparts (Adams et al., 2006). In contrast, older adults who are obese have a similar life expectancy to those who are not obese (Reynolds, Saito, & Crimmins, 2005). This finding suggests that there is something unique about older obese adults. They may be particularly robust given that they lived to older age being obese. It is important to remember, however, that their quality of life may still be affected (i.e., they may be more likely to be living with disease and functional impairments) even though their life expectancy may not be affected. Another possibility is that poorer health in midlife contributes to being underweight that then leads to even further health declines.

Several studies have shown that high body weight—beyond its association with debilitating conditions—impairs physical functioning (Clark, Stump, & Wolinsky, 1998; Damush, Stump, & Clark, 2002; Jenkins, 2004). Excess body weight may inhibit functioning in several ways (Launer, Harris, Rumpel, & Madans, 1994). First, excess body weight typically contributes to inflammation of the joint tissues, making walking painful and difficult (Walford, Harris, & Weindruch, 1987). Second, it increases the amount of mechanical stress placed on body joints, elevating the risk for and severity of osteoarthritis (Clark & Mungai, 1997) and increasing functional impairment. Third, excess weight is associated with a sedentary lifestyle, which negatively affects muscle strength and cardiovascular fitness and may eventually result in difficulties with physical functions such as walking several blocks or climbing flights of stairs (Himes, 2000).

The relationship between diet and body weight and smoking, drinking, and exercising is complex in that body weight may interact with these health behaviors in affecting health and functioning. For example, obesity can contribute to the onset of impairment by restricting one's activities making one less likely to experience the beneficial effects of exercise, and in turn making simple activities difficult. In addition, having a lower BMI is associated with smoking cigarettes (Molarius, Seidell, Kuulasmaa, Dobson, & Sans, 1997), perhaps because smoking acts as an appetite suppressant (Perkins et al., 1991). Smoking, however, can also hamper the body's ability to use oxygen, making daily activities, and indeed breathing, difficult (Stuck et al., 1999). Some research indicates that side effects and symptoms of these obesity-related diseases and conditions may themselves contribute to difficulties in doing such things as walking up stairs or getting up from a chair (Himes, 1999; Jenkins, 2004).

Researchers examining the health status of adults must be attentive to the complex interrelationships among body weight, disease, and functional impairment in this age group. Interventions to encourage healthy weight maintenance and weight management are essential, especially for African-American and Latino adults. Targeting obesity is particularly vital to prevent or delay the onset of disease and functional impairment and thereby improve the quality of life of the adult population.

## SMOKING

Smoking in the United States most commonly refers to the consumption of tobacco via cigarettes, but it may also include the use of cigars or a pipe. Like obesity, smoking contributes to a variety of diseases (particularly many cancers and respiratory illnesses), life-threatening health conditions such as heart disease, functional difficulties decreased longevity and higher health care costs. Yet, despite public knowledge of these risks, more than a quarter of the U.S. population continues to smoke (Lahiri & Song, 2000). The proliferation of smoking bans since the late 1990s is likely to have a beneficial effect on the long-term health of society. Among Americans, however, smoking is still considered the most avoidable cause of death (National Cancer Institute, 2007).

**Theories about Why People Smoke** Given the high incidence of smoking in the face of known health risks and public campaigns against smoking, an important

question for researchers and health professionals alike is: What factors motivate people to stop smoking? According to the Health Belief Model (discussed above), an important factor in motivation to change unhealthy behavior is the perceived threat posed by the behavior. Individuals who view their smoking behavior as a threat to their health or life span may be much more motivated to quit smoking than those who do not understand or who underestimate how detrimental smoking is to their lives (Schoenbaum, 1997). Research has shown that smokers know, but tend to underestimate, the dangers of smoking (Schoenbaum, 1997; Smith, Taylor, & Sloan, 2001). A small fraction of smokers may accurately assess the threat posed by smoking, but choose to smoke regardless because they have a high tolerance for risk in this and other areas of their lives (Barsky, Juster, Kimball, & Shapiro, 1997).

**Smoking Internationally** With the bans on smoking in public areas enacted since the late 1990s, particularly in the United States, smoking in higher income countries is steadily becoming more socially unacceptable. With the loss of revenue from these countries, tobacco companies are more heavily marketing in lower income countries to offset the loss. Compared to higher income countries, the health impact of the increased smoking rates may be even greater in lower income countries, where more highly infectious diseases, such as tuberculosis, are still common. It is projected that by 2030 approximately 80% of annual tobacco use deaths will be from lower income countries (Mathers & Loncar, 2006). Aside from the tremendous health impact that tobacco can have on adults from lower income countries, it also takes a severe economic toll. Individuals from these countries may spend already limited resources on tobacco rather than on education and food (World Health Organization, 2007).

**Relationship with Sociodemographic Characteristics** Adult smoking varies by education, race/ethnicity, gender, age, and income. Level of education may be particularly useful in helping practitioners to understand patterns and trends in smoking behavior and aiding health professionals in targeting critical subgroups for smoking cessation programs. Adults with lower educational attainment and income are more likely to smoke compared to adults with higher socioeconomic status (Lockery & Stanford, 1996). Smoking also varies by race and ethnicity, with African-American adults having similar smoking rates as White adults, and higher rates than Hispanic and Asian/Pacific Islander adults (Henry J. Kaiser Family Foundation, 2006). In regard to age and gender, adults in their mid-20s have the highest smoking rates, after which rates tend to decline, and men are more likely to smoke than women.

**Smoking Cessation** Given that smoking contributes to disease, disabling conditions, and decreased longevity, a substantial and growing body of literature addresses smoking cessation. More specifically, one question that is important to study is: What factors may motivate someone to quit smoking? Being diagnosed with a serious chronic condition may motivate an adult to quit smoking. Many older adults do not easily alter lifelong poor health behaviors (Franks et al., 2002). Rather, major health events or transitions spur such changes. This is evidenced by long-term smokers quitting following a cardiac event, such as a heart attack. Higher levels of education may make an older adult even more likely to quit smoking following a health event (Wray, Herzog, Willis, & Wallace, 1998). For example, once an individual is diagnosed with diabetes, they have a higher probability of smoking cessation if they have a college degree compared to having 9 years of education or less (Kahn, 1998). Other life course events, such as having a child, may also prompt an individual to quit smoking.

Another factor that may motivate an individual to quit smoking is the notion that after a number of years, former smoker's health outcomes become similar to those of adults who have never smoked. Smokers are more likely to live more years in failing health. An interesting and optimistic finding, however, is that in regard to the years of healthy life remaining, former smokers (those who stopped smoking 15 or more years ago) were similar to those who never smoked. In order to encourage smoking cessation, health professionals may want to inform patients of the association of smoking with a decrease in living better (Østbye & Taylor, 2004) and educate them on the notion that quitting smoking increases the chances of a healthier life.

Spousal support may also facilitate smoking cessation. At its best, the marital relationship is uniquely intimate and supportive. Individuals also tend to marry people similar to themselves in regard to educational attainment, socioeconomic status, and racial and cultural backgrounds. Thus it is plausible that beneficial changes in smoking behavior may be more likely to be initiated or maintained when both spouses participate in the effort. Clearly, this notion of spousal participation and support has important implications for smoking cessation efforts (Franks et al., 2002).

## ALCOHOL CONSUMPTION

Drinking is defined as the consumption of alcoholic beverages such as beer, wine, or liquor. Researchers and medical professionals consider both the quantity and frequency of alcohol consumption in assessing drinking behavior. Moderate alcohol consumption is defined as no more than one drink per day for men 65 years of age and older and for women of any age and no more than two

drinks per day for men under 65 years (National Institute on Alcohol Abuse and Alcoholism (NIAAA, 1992). The *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition, revised (1987), defines alcohol dependence as positive responses to any three of the following four CAGE (derived from the operant word in each of the four screening questions) assessment questions: (a) Have you ever felt that you should cut down on your drinking? (b) Have people ever annoyed you by criticizing your drinking? (c) Have you ever felt bad or guilty about drinking? and (d) Have you ever taken a drink first thing in the morning to steady your nerves or get rid of a hangover? (Ewing, 1984). A positive response to any one of the four CAGE questions could be indicative of an alcohol problem.

Another definition of heavy or problem drinking commonly used in social science and medical research is binge drinking. The NIAAA's National Advisory Council defines binge drinking as behavior that produces a blood alcohol concentration of 0.08-gram percent or above, which is typically having five or more drinks (men) or four or more drinks (women) in about 2 hours. Heavy drinking, a related term, can be defined as five or more drinks per day for men and four or more drinks per day for women.

**Historical Patterns in Alcohol Consumption** Alcohol use was socially acceptable and increased in popularity starting in the mid-1880s until the prevalence of alcohol-related accidents and illnesses become so widespread and problematic that the social acceptability plummeted, culminating with Prohibition in 1919. Prohibition was revoked in 1933, and a dramatic upswing in the use of alcohol occurred after World War II, followed by a more gradual increase through the 1970s with a peak in 1975 (Nephew, Williams, Stinson, Nguyen, & Dufour, 1999). Recognition of the increase in certain morbidities associated with excessive alcohol use led to a gradual decline in alcohol use until around the late 1990s. Population-based estimates of alcohol use among adults show an increase since the late 1990s (Lakins, Williams, & Yi, 2007).

**Characteristics Influencing Alcohol Consumption** At the population level, patterns of alcohol use vary by societal, cultural, familial, and sociodemographic factors in part because societies and cultural subgroups vary in their social acceptance of alcohol use. For example, cultural conventions about who consumes alcohol and under what circumstances may at least partly explain why men have a higher percentage of heavy alcohol use than women and why Latino and African-American adults have higher percentages of problem drinking than White adults. Within subgroups, families (via family values) further differentiate individual alcohol behavior (Zucker, 2000).

Biological traits that predispose an individual to alcohol use or abuse further differentiate drinking behavior and should not be ignored when attempting to understand patterns in alcohol use (Anderson, 1998a & b). Someone with a biological predisposition to problem drinking who lives in an environment that has more liberal attitudes about alcohol may be more likely to develop problems with alcohol than someone surrounded by more conservative alcohol attitudes (Elder & Caspi, 1989).

Among individuals, drinking behavior remains relatively stable throughout life. Alcohol consumption can often change, however, in response to major life events. Hospitalization and disease onset can lead to a reduction in alcohol consumption, as side effects of medication, treatment, or the disease itself may make an individual feel too ill to drink. On the other hand, retirement, job loss, and widowhood may result in increased consumption (Perreira & Sloan, 2001). In general, stressful life events are thought to be associated with increased drinking behavior, although marital transitions (getting married or divorced) both increase and decrease alcohol consumption (Perreira & Sloan, 2001). Individuals' perceptions of and the lifestyle changes associated with these marital transitions may influence how an adult may use alcohol (either increasing or decreasing consumption) in managing the transition (Perreira & Sloan, 2001).

Socioeconomic and demographic characteristics also influence alcohol consumption. Adults who have lower educational attainment and reside in more rural areas have higher rates of drinking problems (Dawson, Grant, Chou, & Pickering, 1995). Race and ethnicity also influence alcohol consumption. Specifically, in more recent years, a greater percentage of African-American and Latino adults are abstaining from alcohol, but at the same time a greater percentage among those who drink are drinking heavily (Galvan & Caetano, 2003). Factors such as access to health care and racial discrimination are thought to be important explanations for the racial and ethnic differentials in alcohol use. Health insurance status is thought to be another socioeconomic factor linked to drinking behavior. Individuals with health insurance may be more likely to receive primary, secondary, and tertiary forms of treatment for illness and disease than those without. Regular care is thought to translate into better health and potentially less problem drinking behavior. This insurance–drinking connection is supported by two findings: Compared to adults who are either continuously or intermittently insured, adults who are continuously uninsured are more likely to either drink heavily or abstain from alcohol (Baker, Sudano, Albert, Borawski, & Dor, 2001)—both of which are typically related to poorer health and adults who are continuously uninsured tend to have higher CAGE scores.

**Drinking and Health** Although the effects of alcohol use on mortality have long intrigued social scientists, health professionals, and policymakers, until more recently, the effects of drinking on disease and morbidity has received much less attention, with the exception of its impact on cardiovascular and liver disease (Perreira & Sloan, 2002). Nevertheless, excessive alcohol use has been shown to have deleterious effects on various aspects of health and functioning in adulthood. Negative health effects include increased risk of onset of functional impairment and increased amount of impairment; greater likelihood of developing depression and disease (particularly some cancers); and increased risk of occupational injury (Ostermann & Sloan, 2001; Perreira & Sloan, 2002; Zwerling et al., 1996). Yet moderate alcohol consumption (not simply red wine consumption) in adulthood may have some beneficial effects on health, particularly cardiovascular disease. Albeit controversial, there is also growing evidence for a beneficial effect of moderate alcohol consumption on cognition, functional limitation, and disability (Kutty, 2000; Ostermann & Sloan, 2001).

In sum, the growing body of work on alcohol consumption's connection with other aspects of health finds that drinking heavily is related to the onset of functional impairment. Having a history of drinking problems is related to the onset of various mental health conditions such as depression. Other studies find that persons who drink in moderation have the lowest rates of disability, with heavy drinkers and those who abstain from drinking each having a greater likelihood of disability. Those who drink heavily, however, also have a greater amount of impairment on their existing activities (Ostermann & Sloan, 2001). To improve overall health and extend active life expectancy, more research is needed in this area to better understand if a relationship exists between moderate alcohol consumption and beneficial health outcomes in various domains of health. It is also important to note that heavy alcohol consumption can have negative effects on other aspects of life besides health, such as marital disruption and unemployment.

## ILLICIT DRUG USE

Illicit drug use can be defined as the intake of substances for nonmedical purposes, used solely for recreation and the feeling the substance (or substances) provides. Illicit drugs are typically classified into categories. There are several categories in which governmental organizations and the like commonly collect information. These include prescription-type sedatives, pain relievers, tranquilizers, and stimulants (again used for nonmedical purposes); hallucinogens (e.g., LSD, PCP, and MDMA [also know as Ecstasy]), cocaine (including crack), heroin, marijuana (including hashish), and inhalants (e.g., gasoline, glue, and paint).

**Characteristics Associated with Drug Use** Drug use varies considerably by socioeconomic characteristics. Age, geographic area, gender, educational attainment, race and ethnicity, and employment status are all characteristics in which trends in drug use vary. More specifically, adults who are employed full-time (versus unemployed or employed part-time), live in metropolitan areas, male, American Indian or Alaskan Natives (compared to individuals who are classified as Asian, of two or more races, Black, White, Hispanic, or Native Hawaiian or other Pacific Islander) are more likely to be currently involved in illicit drug use. Interestingly, though, drug use is highest among adults 18 to 20 years of age followed by adults 21 to 25 years of age; after that there is a gradual decline in illicit drug use with increasing age. College graduates have the lowest rate of current illicit drug use (compared to other individuals classified with lower educational attainment). Yet, compared to adults who did not complete high school, college graduates are more likely to have tried an illicit drug at some point in their lives (SAMHSA, 2006).

**Gateway Hypothesis** The general premise of the gateway hypothesis is that initiation into "harder" classifications of drugs (e.g., cocaine and heroine) is derived from first use (usually in adolescence) of "softer" drugs such as alcohol and cigarettes. There is general support for the gateway hypothesis in the research community. Yet it appears to not be generalizable to all subgroups of the population (e.g., homeless individuals). Certain subgroups seem to follow different substance use trajectories.

Social scientists examine this hypothesis through various lenses, and each contributes unique insights. Economists, for example, typically examine adolescent substance use through the lens of consumer decision-making rather than deviant behavior (Kenkel, Mathios, & Pacula, 2001). Two important economic constructs that contribute to economic modeling of consumer behavior, with alcohol and drug consumption behavior being no different, is the price and availability of goods. Economic theorizing of these two constructs, in regard to the gateway hypothesis, suggests that alcohol and tobacco may serve as gateway drugs in part because of their lower user cost and relatively easy access compared to harder substances. Economic theory argues that the use of these substances varies by gender, race, and ethnicity in part because of accessibility (Kenkel et al., 2001). More specifically, the gateway drug of choice is different for males and females; the two differential initial steps toward illicit drug use appear to be alcohol (for males) and tobacco (for females) (Kandel & Yamaguchi, 1993).

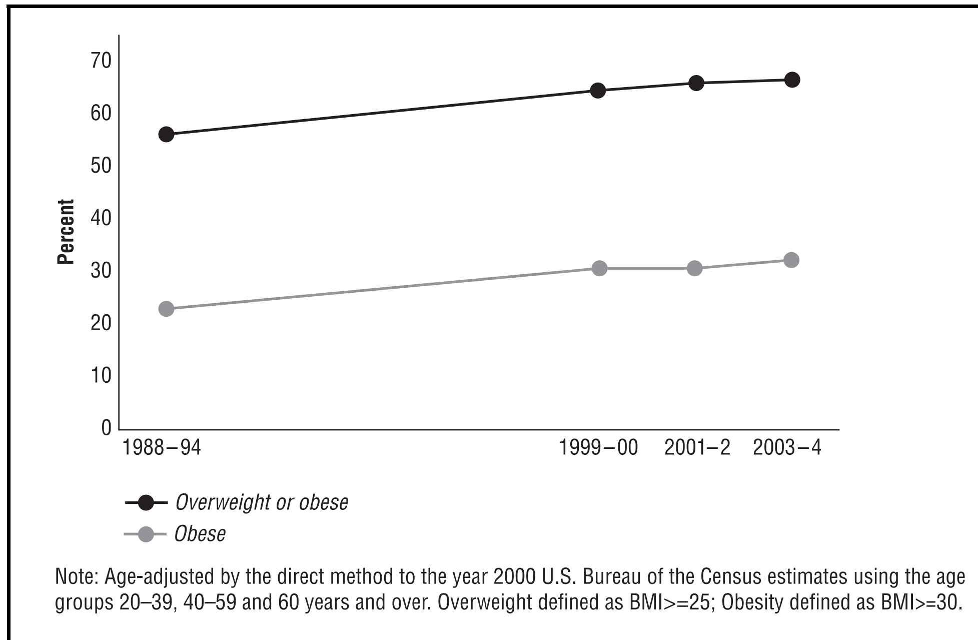


***Figure 1.*** *Trends in adult overweight and obesity, ages 20 years and older.* CENGAGE LEARNING, GALE.

The price and availability of goods as foci in economic modeling of the gateway hypothesis also has important policy implications, particularly in regard to taxation and restrictions of alcohol and drug use. One outstanding policy question for which economic modeling can be particularly useful is: Does a reduction in the use of alcohol or tobacco lead to a reduction in the use of other drugs? There is some evidence to support that indeed higher prices of gateway substances reduce the use of other substances (DeSimone, 1998; Pacula, 1998). With that in mind, taxing the purchase of alcohol and cigarettes and creating stiffer penalties for persons who sell these substances to underage individuals may be some tangible policy-driven methods to reduce substance use problems (Kenkel et al., 2001).

## EXERCISE

Defining exercise is complex. One traditional definition of exercise is to physically exert oneself with the intention of benefiting one's health. There are also various dimensions of exercise that one might consider when discussing a definition: frequency, length of participation, and the type of activity in which one engages (e.g., light or vigorous activity). More recently, researchers, health professionals, and policymakers have taken on a more expansive view of exercise and discuss it in terms of being more physically active or having an active lifestyle. This more modern definition deviates slightly from the more traditional one in that the traditional definition of exercise can be thought of as structured and done with the main purpose of benefiting one's health (e.g., running, bicycling, or swimming), whereas physical activity may or may not be structured and done with the main purpose of having a health benefit. Examples of being physically active are heavy housework, gardening, or dancing. The current recommendation for most adults is 30 minutes of physical activity each day.

The shift from more labor-intensive agricultural and factory jobs to more information management and technical jobs over the past century has contributed to adults being more sedentary. This lack of daily activity on the job is a problem of great public health interest and has made leisure-time physical activity much more important. Lack of exercise is a multifaceted problem that affects many aspects of mental and physical well-being. It has been associated with functional impairment (Jenkins, 2004), depression, survival (Richardson, Kriska, Lantz, & Hayward, 2004), and various diseases such as heart disease, hypertension, cancer, diabetes, and stroke. Because a sedentary lifestyle is an increasing threat to health and longevity, understanding how to incorporate physically active tasks into daily life may prove beneficial in targeting interventions to increase physical activity levels and improve the health of adults.

**Differential Patterns in Exercise** Evidence suggests that women, racial and ethnic minorities, persons with lower socioeconomic status (Crespo, Ainsworth, Keteyian, Heath, & Smit, 1999), married persons (Pettee et al.,

2006), and rural residents (Arcury et al., 2006) are less likely to participate in physical activities. These are the subgroups most important to target for effective exercise interventions. Research on the determinants of exercise has generally found significant positive effects of both early life and adult socioeconomic status, as measured by parents' education, own education, and economic resources (Wray, Alwin, & McCammon, 2005). Spousal relationships impact health in part because of similarities in both partners' environments. Married couples reside together and therefore are exposed to the same environmental toxins and neighborhood stressors and share household income. With that in mind it is not so surprising that their health behaviors are often very similar. If a husband participates in moderate exercise it is likely that his wife will too. This has important implications for encouraging active lifestyles. Encouraging activities that appeal to both spouses may aid in maintaining health-promoting behaviors (Wilson, 2002).

**Exercise, Disease, and Functioning** Exercise provides many mental and physical health benefits, and these occur through a variety of mechanisms. Lack of exercise contributes to decreased muscle strength and cardiovascular fitness, which can increase the risk of disease and decrease the ability to perform basic daily activities such as walking or dressing oneself. Adults who participate in regular vigorous physical activity are less likely to experience various diseases and the onset of functional impairment.

Physical exercise has also been shown to have beneficial effects on diverse mental health outcomes, particularly depression (Ruuskanen & Ruoppila, 1995), and has been suggested as a possible treatment for this condition (Barbour & Blumenthal, 2005; Blumenthal et al., 1999). Among adults (60 years of age and older), those who did not need to give up any physical activities and those who found a satisfying replacement for them had lower levels of depressive symptoms (Benyamini & Lomranz, 2004). Several possible linking mechanisms have been suggested for this association including both physiological mechanisms (e.g., central monoamine theory) and psychological factors (e.g., improvements in self-efficacy) (Barbour & Blumenthal, 2005).

Health-promoting behaviors such as exercise are assumed to have the potential to improve quality of life and thus decrease health care costs by preventing disease. Even among older adults this is generally the case—light and heavy long-term exercise does show a slight decrease in health care use (Lee & Kobayashi, 2001). Some empirical evidence, however, supports the opposite patterns for short-term exercise. Short-term light exercise is related to a slight increase in the use of the health care system (e.g., doctor visits or hospital days). One possible reason for this finding is that older adults who initiate only a light exercise regimen but do not maintain it for longer periods may be less healthy. They may view themselves as unhealthy and, knowing the health benefits of exercise, try to engage in a more active lifestyle. Because they do not maintain their exercise regimen, however, they do not reap the health benefits.

It is important to recognize the negative health effects that arise from a sedentary lifestyle. Encouraging routine daily exercise is a significant goal in the effort to improve the health and quality of life of adults. It is also important for policymakers and persons engaged in clinical practice to remember that individuals are more apt to spend time doing what they enjoy and to make time to do such activities, so it is especially important to make physical activities more appealing to certain subgroups of adults who are among the least physically active. More knowledge on the barriers of routine exercise and having an active lifestyle might help both policymakers and researchers target interventions and resources most cost-effectively.

## CONCLUSION

Encouraging positive health behaviors early in life is important because health behavior change over the life course is difficult. Positive behavior change, however, even in later life, can be beneficial to overall health. With chronic diseases with long etiologies being common in the United States, a long-term commitment to a healthy lifestyle is encouraged in order to prevent rather than manage such illnesses.

The study of health behaviors is a fruitful area of research for both public health practice and policy. With poor health behaviors, particularly lack of physical activity and excess body weight, being commonplace in the United States, insight on the characteristics that may assist in the development of interventions and educational tools to encourage active and healthy behaviors for adults is important. A better understanding of the relationship between barriers to participating in exercise, maintaining a health body weight, smoking cessation, and responsible drinking will also allow public health policymakers more effectively target resources and interventions to reduce the life-threatening health problems associated with behaviors and improve the health and quality of life of adults.

**SEE ALSO** Volume 2: *Health Care Use, Adulthood; Health Differentials/Disparities, Adulthood; Obesity, Adulthood; Time Use, Adulthood;* Volume 3: *Cancer, Adulthood and Later Life; Cardiovascular Disease; Health Literacy; Life Expectancy; Mortality; Sleep Patterns and Behavior.*

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***Kristi Rahrig Jenkins***

# HEALTH CARE USE, ADULTHOOD

Health care can be defined as any product or service designed to prevent, treat, or manage illness, or maintain mental and physical well-being. Health care has gone from a relatively minor part of the world's economy, to a sizable proportion of the economies of most developed nations. The United States, for example, spent about $1.9 trillion on health care in 2004, or 16% of its gross domestic product (GDP) (Stanton & Rutherford, 2005). Though the United States spends far more both in absolute and relative terms than any other country (Schoen et al., 2007), the increasing prominence of health care in people's lives and in national budgets is a worldwide phenomenon.

## THEORIES OF HEALTH CARE USE

Various aspects of health care, including the determinants and consequences of utilization, are studied across a variety of disciplines, including sociology, economics, and public health. This interdisciplinary field is often referred to as health services research, and several scientific journals are dedicated to the topic. In this literature, two theoretical models, the Health Belief Model (Rosenstock, 1966) and the Behavioral Model of Health Care Use (Andersen, 1968), are commonly used to understand patterns of health care utilization. The Health Belief Model was developed to explain health behavior and use of preventive care, and focuses on one's perceptions, beliefs, and other psychological characteristics that determine whether individuals perceive themselves to have a health problem or are willing to change their behavior or seek care to ameliorate it. The Health Belief Model asserts that the decision to use health care, or to change any health related behavior, is determined by perceptions across the following four dimensions: (a) severity of the illness; (b) susceptibility to the illness; (c) the benefits associated with preventive use or behavioral change; and (d) the barriers to use or behavior.

In contrast, the Behavioral Model takes a systems approach to understanding health care use, categorizing the determinants of use into three groups: (a) factors that predispose individuals to use health care; (b) factors that enable individuals to get care, or impede them from doing so; and (c) factors that relate to the need for health care. Demographic variables such as age, gender, and race are examples of variables usually considered *predisposing* factors; insurance coverage and income are examples of important *enabling* or *impeding* factors; and the presence or absence of specific chronic conditions are examples of *need* factors. Note that the Behavioral Model tends to lump all the social and psychological factors central to the Health Belief Model into the predisposing category.

Though developed in the 1960s, both the Health Belief Model and Behavioral Model are widely used in health services research in the early 21st century. Both are, nonetheless, subject to several critiques. Critics of the Behavioral Model suggest that it places too little emphasis on social, cultural, and psychological factors that contribute to health care use, whereas critics of the Health Belief Model suggest that it places too little emphasis on individual and organizational barriers to obtaining needed health care. Both theoretical frameworks are criticized for being little help in understanding issues regarding the timing of health care utilization, the quality of care, and the continuity of care—all issues that are of growing importance in health services research. It has also been suggested that both the Behavioral Model and the Health Belief Model place too much emphasis on individual decision making, while underemphasizing how social context and social interaction affect beliefs on health and illness and, also, what actions are appropriate and desirable in response to different health conditions (Pescosolido, 1991; Pescosolido, 1992).

From these criticisms, new models are emerging. One example is the Network Episode Model (Pescosolido, 1991; Pescosolido, 1992). Its main focus is how social interaction, structured by social networks, influences the ways individuals recognize and respond to illness. Rather than viewing decisions regarding health care as one-time choices, the Network Episode Model views health care use to be a dynamic process, informed by social interaction both in families and communities and in formal health care settings. Utilization models, like the Network Episode Model, that move away from examining single choices are promising because health care use is increasingly driven by chronic, age- and lifestyle-related conditions. Such conditions often require long-term reliance on formal and informal health care and, therefore, decisions regarding health care use are not one-time occurrences.

## COMPLEMENTARY AND ALTERNATIVE MEDICINE

Complementary and alternative medicine (CAM) is a diverse set of approaches and therapies for treating illness and promoting well-being that generally fall outside of standard medical practices. These approaches are usually not taught in medical schools, and not practiced by physicians or other professionals trained in medical programs. Examples of common CAM therapies include chiropractic, massage, homeopathy, and acupuncture. Complementary medicine is distinct from alternative medicine in that the latter is meant to be used in place of standard medical procedures, while the former is meant to be used in conjunction with medical procedures to increase their efficacy or reduce side effects.

Use of complementary and alternative medicine is common, even in industrialized countries with modern medical systems. For example, a survey in the United States shows that the number of individuals using some form of CAM during 2002 was over 62% (Pagan & Pauly, 2005). Furthermore, the use of CAM has been increasing for at least the late 1980s (Eisenberg, Davis, Ettner, & Appel, 1998).

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### DATA ON HEALTH CARE USE AND ACCESS

Data on health care use generally come from two sources: surveys and administrative records. In the United States, for example, the National Health Interview Surveys (NHIS) and the Medical Expenditure Panel Surveys (MEPS) collect information on health insurance coverage, use, expenditures, and attitudes about health care for the noninstitutionalized population; the Medicare Current Beneficiary Survey (MCBS) collects information on enrollees in the Medicare program. The second source of data on health care use, administrative records, makes use of data from hospital discharge records and other records kept by medical practices and institutions. Both survey and administrative data sources have advantages and disadvantages. The advantage of administrative records is that they usually provide accurate information on the exact type of service used, the date of use, how much was paid, and the source of payment. The disadvantage of this type of data is that detailed information on the characteristics of individuals and households such as income, education, and attitudes about health is limited or nonexistent. Surveys, in contrast, can provide very rich data on individuals, their families, and their attitudes about health, but rely heavily on self-reports for information on health care use and expenditures.

Access to health care, or the ability to obtain needed medical services in a timely manner, is an important

concept in health services research, but is difficult to measure. It is frequently measured by health care use, but this is not ideal because use is strongly linked to the need for health care. For example, healthy individuals with jobs that provide generous health benefits may have excellent access to health care, but little or no use. In contrast, unhealthy individuals with poor health insurance coverage may have very high levels of health care use out of medical necessity, but still not be able to get all the care they truly need. Several indicators of access are frequently used to avoid this problem. One approach is to consider hospitalizations for what is termed *ambulatory care sensitive conditions* (Ansari, Laditka, & Laditka, 2006). The underlying idea is that a hospitalization for a condition that could have been avoided or managed better in an outpatient setting is a sign of having poor access to quality health care. This approach to studying health care access often uses administrative records. Other commonly used measures for access are whether someone has a usual source of care, and subjective assessments of the ability to obtain needed medical care (Kirby, Taliaferro, & Zuvekas, 2005; Zuvekas & Taliaferro, 2003). These measures usually come from survey data.

## PATTERNS OF HEALTH CARE USE OVER THE LIFE COURSE

Though the amount and intensity of health care use varies widely across individuals, there is a definite pattern of use seen in a typical lifetime, at least in industrialized societies. Health care use is high at the beginning of life, as many births in industrialized countries are now in hospitals and attended by physicians, and continues at a fairly high level into adolescence. Standard medical practice in most industrialized countries consists of frequent visits for very young children, with declining frequency as children age. Health care use declines thereafter and young adults beginning their careers tend to have the lowest health care use of any age group, as they tend to be the healthiest, and are least likely to have the time or money to spend on physician visits. In the United States, these are the years in which individuals are least likely to have health insurance. For women, childbearing prompts an increase in health care use. For both men and women, individuals begin to use more health care services starting in their 40s and 50s and this increases steeply and in a nonlinear fashion with age. Thus, the shape of the health care utilization curve resembles a mortality curve, in that the incidence of use is high at very young ages, declines until early adulthood, and increases thereafter.

A noteworthy characteristic of health care use across the life course is the extent to which it is concentrated toward the end of life. For example, data from the MCBS in the United States suggest that around 27% of all health care expenses among older people go toward care received in the last year of life (Hogan, Lunney, Gabel, & Lynn, 2001). This frequently cited statistic is, however, somewhat misleading. The concentration of usage in the last year of life is often considered the main cause of the high cost of care, but this is debatable. The proportion of medical expenses incurred in the final year of life has not changed much since the 1970s (Hogan et al., 2001), despite the rapid development of expensive new medical technology. Use of inpatient hospital services, the most expensive type of health care, by the terminally ill actually declined beginning in the late 1980s and 1990s (Hoover, Crystal, Kumar, Sambamoorthi, & Cantor, 2002). It is possible that initiatives to promote the use of hospice care and advance directives may have held down end of life expenses. When expenses for decedents are compared to that of survivors with similarly severe conditions, differences in expenses are minimal (Hogan et al., 2001). Thus, what is often termed the *high cost of dying* is really just the high cost of being severely ill.

## DISPARITIES IN HEALTH CARE USE AND ACCESS

Health services researchers have documented large and persistent disparities in health care use and access to quality health care by race, ethnicity, and various socioeconomic characteristics, even in nations with universal health care coverage. Racial and ethnic minorities and the poor generally use less care, report more problems with getting care, and have less favorable outcomes from the care they get than others (Agency for Healthcare Research and Quality, 2006). In the United States, for example, Blacks and Hispanics are less likely to have any ambulatory care during a year, are less likely to have a usual source of care, and more likely to report barriers to obtaining care than non-Hispanic Whites (Kirby, Taliaferro, & Zuvekas, 2005). Differences emerge for many specific services too. For example, in the United States, Black children are less likely to have up-to-date vaccination coverage than Whites (Chu, Barker, & Smith, 2004), and Black adults at risk of sudden cardiac death are less likely to have an implantable defibrillator (Stanley, DeLia, & Cantor, 2007). Socioeconomic disparities in access and use are as large as or larger than racial or ethnic disparities. These disparities in health care regarding socioeconomics and race or ethnicity are still not fully understood by researchers. Individual, family, and community characteristics currently thought to affect disparities explain only a fraction of the differences observed (Kirby, Taliaferro, & Zuvekas, 2005).

## HEALTH SERVICES RESEARCH AND LIFE COURSE CONCEPTS

Developing a system that organizes, finances, and distributes health care in a financially sustainable and equitable

way is a goal that motivates much health services research. To achieve this, a basic understanding of how people perceive and respond to health and illness, and how they interact with various actors in modern health care systems, is essential. To date, life course concepts have been notably lacking in this effort, and have been lacking in health services research in general. This is unfortunate because as populations age and health care utilization is increasingly driven by conditions related to chronic diseases, life course concepts become increasingly relevant. For example, the life course concepts of timing, sequence, and duration applied to different health-related experiences, including interactions with health care systems, could shed light on some of the questions important in health services research. *Linked lives* is another important life course principle that is relevant in the study of health care use. Attitudes about health and health care, and about how best to respond to illness, are formed and influenced by interactions within complex social networks. These and other concepts from the life course perspective are powerful and largely untapped resources in health services research.

**SEE ALSO** Volume 2: *Health Differentials/Disparities, Adulthood; Health Insurance; Policy, Health;* Volume 3: *Health Literacy.*

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# HEALTH DIFFERENTIALS/ DISPARITIES, ADULTHOOD

The term *health disparities* refers to differences in measured mental health, physical health, and death rates (often termed *outcomes*) across meaningful social and demographic groups within a population. While a population can be defined at many different levels (e.g., a hospital population, a clinic population, a city population, or a state population), this entry focuses on health disparities within the working-aged (ages 25 to 64) population of the United States as a whole. Because of the very wide range of health outcomes that can be examined, only the most general of those outcomes will be dissected here. Similarly, because of the breadth of sociodemographic groups for which disparities are measured, this entry will focus on health disparities in adulthood by gender, race and ethnicity, and educational attainment, while recognizing that there are also well-documented U.S. health disparities across income groups, occupational groups, geographic regions, and more.

## THE SIGNIFICANCE OF HEALTH DISPARITIES

One of the two overarching goals of the U.S. government's *Healthy People 2010* initiative is to eliminate health disparities among different segments of the population. Specifically, the goal refers to differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation (U.S. Department of Health and Human Services, 2000). The *Healthy People 2010* initiative and the health disparities goal, in particular, have helped create enormous scientific

and policy interest on this topic. Scientifically, health disparity studies range across academic disciplines, from public health, medicine, nursing, and biology to economics, geography, sociology, and demography. Indeed, it would be impossible for any review to cover the massive amount of literature on this topic that has been produced in many disciplines since the early 1990s. Policy-wise, the goals and objectives of *Healthy People 2010* have, perhaps most notably, led to significant increases in funding at the federal level for research and programs specifically dedicated toward the better understanding of why health disparities exist and how to eliminate them.

The significance of U.S. health disparities is at least threefold. First, documented health disparities indicate inequalities in well-being across subgroups of a population. Thus, in a society that is striving for both overall excellence as well as excellence in health within all subgroups of the population, disparities in measured outcomes symbolize systematic, unequal access to some of society's most important resources, including the length of life itself. At issue, then, is fairness across population subgroups. Second, continued health disparities in a nation as wealthy as the United States serves as a reminder that even though the overall level of health achievements over the last century or more has been extraordinary, there is still much room for improvement if all groups are to be as healthy as the most advantaged group. Third, individuals in the subgroups who have less favorable health and higher mortality rates experience substantial amounts of human suffering, increased health care costs, and loss of economic productivity that could potentially be alleviated if health disparities did not exist. Together, these add up to some of the most critical social, health, and ethical issues in the 21st-century United States.

Beyond the general significance of health disparities, the topic's significance among the U.S. working-aged population may be especially important. While a great deal of research—and justifiably so—focuses on health disparities among the older population (i.e., age 65 and older) of the United States, measured health disparities by gender, race or ethnicity, and education have often been found to be wider during the working-aged years in comparison to the older adult years (Rogers et al., 2000). Moreover, thinking about health disparities from a life course perspective makes clear that what happens during the working-aged years—such as marriage or divorce, parenting, career trajectories, income trajectories, access to health insurance, and preparation for retirement—is a very important determinant of later life health. Thus, the working-aged years help to structure health disparities during middle and old age. Moreover, life course approaches to health disparities should step back even further—to adolescence, childhood, and even previous generations—to best understand how disparities in the working ages and older adult ages develop.

## CURRENT HEALTH DISPARITIES WITHIN THE U.S. WORKING-AGED POPULATION

In this section, disparities will be briefly documented in two general but very important measures of health during the working-aged years—self-reported health and mortality rates—by gender, race or ethnicity, and education. The reasoning for the focus on these two common health outcomes is that, first, self-reported health has been found to be a very strong predictor of subsequent mortality risk, even when other physical health conditions are statistically controlled. Further, it is a standard item on many health surveys. In this case, people who report either fair or poor health are compared to those who report excellent, very good, or good health. Second, mortality rates provide a useful summary indicator of the overall health of a population and its subgroups. There are, of course, many other indicators that could be examined (e.g., activity limitations, presence of hypertension or diabetes, cancer prevalence, measures of mental health, and more). Further, this entry's examination of sociodemographic disparities will be limited to gender, race or ethnicity, and education. The U.S. population clearly continues to be stratified across categories of these sociodemographic factors and this stratification has significant consequences for health outcomes. A more comprehensive documentation would include a full analysis of other sociodemographic characteristics including, but not limited to, sexual orientation, religion, marital status, income, occupation, immigration status, and geographic location.

Nationally representative and publicly available data collected and made available by the federal government are often used to document these disparities. This entry's documentation of disparities in self-reported health specifically draws on nationally representative survey data from the 2004 National Health Interview Survey (NHIS), collected and processed by the National Center for Health Statistics. This annual survey of the U.S. population has collected data from tens of thousands of noninstitutionalized U.S. adults each year since 1957 and is considered to be the nation's core source of information for population-level health and health care trends and disparities. This entry's documentation of disparities in mortality within the working-aged population specifically draws on published data from the National Vital Statistics System, which is also a product of the National Center for Health Statistics. The calculation of mortality rates in this system relies on death counts, taken from U.S. death certificates, as the numerator in the mortality rates and population estimates,

| | AGES 25–34 | 35–44 | 45–54 | 55–64 | Total (25–64) |
|---|---|---|---|---|---|
| **Gender** | | | | | |
| *Men^* | 4.61 | 7.16 | 12.43 | 19.13 | 10.07 |
| Women | 6.70 | 9.58 | 14.54 | 20.01 | 12.11 |
| **Race/Ethnicity** | | | | | |
| *Non-Hispanic White^* | 4.35 | 7.10 | 10.58 | 15.85 | 9.37 |
| Non-Hispanic Black | 9.23 | 11.45 | 21.04 | 29.93 | 16.37 |
| Mexican | 6.69 | 10.36 | 20.60 | 31.90 | 13.23 |
| Puerto Rican | 12.09 | 16.14 | 17.96 | 33.71 | 17.95 |
| Other Hispanic | 4.72 | 7.62 | 17.32 | 24.58 | 11.40 |
| Asian | 2.80 | 5.66 | 10.64 | 16.44 | 7.90 |
| American Indian | 12.93 | 17.52 | 30.92 | 38.73 | 23.79 |
| **Education (Years Completed)** | | | | | |
| *17 or more^* | 1.37 | 1.37 | 4.06 | 6.33 | 3.33 |
| 16 | 1.86 | 3.87 | 6.44 | 9.85 | 4.90 |
| 13–15 | 5.17 | 7.87 | 11.49 | 15.92 | 9.48 |
| 12 | 6.53 | 9.32 | 14.87 | 19.78 | 12.19 |
| 9–11 | 11.13 | 18.26 | 27.68 | 36.71 | 21.60 |
| 0–8 | 10.74 | 15.13 | 31.81 | 45.01 | 24.81 |

SOURCE: National Health Interview Survey (2004).
^reference group
*$p$<.05
**$p$<.01

***Table 1.*** *Percentage of U.S. working-aged adults who report fair/poor health in 2004 by sociodemographic group.* CENGAGE LEARNING, GALE.

taken from the U.S. Census Bureau, as the denominator of the mortality rates.

Turning first to self-reported health, Table 1 shows the percentage of U.S. working-aged adults who report being in fair or poor heath, by sociodemographic group and by age. Across each sociodemographic group examined, the percentage of individuals reporting fair or poor health is higher in older age categories, as might be expected. By gender, women report worse health than men for all age groups except between 55 and 64; in that interval, there is no statistically significant difference in the percentage of men and women reporting fair or poor health. The overall gender difference in reporting poor or fair health in the full age range of 25 to 64, 12.1% for women versus 10.1% for men, while statistically significant, is not nearly as wide as the disparities by race or ethnicity and educational level.

Table 1 next shows self-reported health disparities across seven self-identified racial or ethnic groups. American Indians have the highest percentage of all the racial and ethnic groups of reporting fair or poor health in each of the 10-year age categories shown, as well as for the entire working-aged population. For the entire age range, 23.8% of American Indians reported poor or fair health, compared to just 9.4% among non-Hispanic Whites. In contrast, there are no significant differences between Asian Americans and non-Hispanic Whites in reporting fair or poor health. Both non-Hispanic Blacks and Mexican Americans have significantly higher percentages of persons reporting fair or poor health than do non-Hispanic Whites within each 10-year age category, as well as for the entire age range. Puerto Ricans have significantly higher percentages of persons reporting fair or poor health than non-Hispanic Whites for ages 35 to 44 and 55 to 64; these percentages are also higher than those for non-Hispanic Blacks and Mexican Americans.

Table 1 further shows that educational disparities in self-reported health are substantial. Nearly all education levels for all age groups are characterized by a higher percentage of individuals reporting fair or poor health when compared to the reference category of 17 or more years of education; the only exception is that the health reports of persons with 16 years of completed education do not differ from those with 17 or more years in the 25 to 34 age group. Looking within the 10-year age categories, some of these self-reported health disparities by education are very large. For example, within the 35 to 44 age group, 18.3% of people with 9 to 11 years of education reported poor or fair health, compared to just 1.4% of those with 17 or more years of education. Even

| | AGES 25–34 | 35–44 | 45–54 | 55–64 | Total (25–64) |
|---|---|---|---|---|---|
| **Gender** | | | | | |
| Men | 139.5 | 243.6 | 543.5 | 1,128.8 | 457.2 |
| Women | 63.5 | 143.5 | 314.3 | 707.4 | 278.6 |
| Total | 102.1 | 193.5 | 427.0 | 910.3 | 367.2 |
| **Race/Ethnicity** | | | | | |
| Non-Hispanic White | 95.9 | 185.9 | 400.8 | 875.1 | 372.2 |
| Non-Hispanic Black | 186.5 | 332.3 | 760.8 | 1,527.9 | 585.9 |
| Mexican | 76.3 | 133.4 | 302.2 | 679.1 | 195.6 |
| Puerto Rican | 101.4 | 217.0 | 457.3 | 931.2 | 339.5 |
| Other Hispanic | 76.3 | 125.7 | 285.0 | 600.9 | 205.5 |
| Other | 58.0 | 106.6 | 241.2 | 521.2 | 186.1 |
| **Education (Years Completed)*** | | | | | |
| 13 or more | 53.4 | 104.4 | 257.7 | 566.3 | 214.7 |
| 12 | 161.9 | 282.8 | 598.3 | 1,141.5 | 515.3 |
| 0–11 | 202.2 | 408.9 | 850.3 | 1,588.4 | 715.2 |

*Total of 36 States Reporting and the District of Columbia.
SOURCE: Derived from Miniño et al. (2007).
Rates are per 100,000 population in group specified.
Data as of July 1, 2004.

***Table 2.*** *Age-specific mortality rates for US working-aged adults by sociodemographic group.* CENGAGE LEARNING, GALE.

at the highest levels of education, there are significant differences between 16 years of education (which is synonymous with attaining a bachelor's degree) and 17 years or more of education (which is any education beyond a bachelor's degree); for example, 4.9% of working-aged adults with 16 years of education reported poor or fair health compared to 3.3% of those with 17 or more years of education.

Table 2 displays age-specific mortality rates (number of deaths per 100,000 persons) for U.S. working-aged adults by sociodemographic group. For all categories of each sociodemographic factor, mortality rates consistently are higher among older age groups, as might be expected. Within each 10-year age category, females have much lower mortality rates than their male counterparts. At the youngest age group (ages 25 to 34), for example, the male mortality rate is more than double that of females. Higher male rates of mortality across the life course result in a life expectancy for men (74.7 years) that is currently more than 5 years less than that of women (80.0 years). This life expectancy disparity by gender is lower than the 8-year disparity observed in the 1970s, but is still very wide (Arias, 2007).

Table 2 next shows age-specific mortality rates for six racial and ethnic groups. Non-Hispanic Blacks experience the highest mortality rate within every age group as well as within the entire 25 to 64 age range. Among the Hispanic ethnic groups, Puerto Ricans experience the highest mortality rates, whereas Mexican Americans and other Hispanics experience relatively similar and much lower age-specific mortality than Puerto Ricans and non-Hispanic Blacks. Within each age group, Puerto Ricans are the only Hispanic ethnic group to experience a higher mortality rate than non-Hispanic Whites. However, for all ages combined, the Puerto Rican mortality rate is lower than that of non-Hispanic Whites. This reflects the younger average age of the Puerto Rican population compared to the non-Hispanic White population and the fact that mortality rates are lower for younger people.

Mexican Americans and other Hispanics, by contrast, experience mortality rates that are lower than non-Hispanic Whites within each 10-year age group, as well as within the entire working-aged population. The relatively low mortality rates of these Hispanic ethnic groups, in combination with their relatively high rates of poverty and low levels of education, have been termed an *epidemiologic paradox* (Markides & Coreil, 1986). This is in contrast to the very strong correlation between the high rates of poverty and high mortality rates experienced by non-Hispanic Blacks. The epidemiologic paradox among U.S. Mexican Americans is a topic of much scientific research. Current work suggests two clear reasons why Mexican Americans exhibit relatively low rates of mortality in the United States: (a) They are characterized by a high percentage of recent

immigrants, who tend to be very healthy when they migrate to the United States; and (b) they exhibit very low levels of negative health behaviors, such as cigarette smoking, heavy alcohol use, and use of illegal drugs.

Turning to educational disparities, it is clear that mortality rates have an inverse relationship with education for each 10-year age group. That is, individuals who attain higher levels of education have much lower rates of working-aged mortality in the United States. For example, the mortality rate for individuals aged 25 to 34 with 0 to 11 years of education is about 4 times as high as the rate for individuals with 13 or more years of education in that age group. Moreover, it is evident that education can protect health not only within a particular age group, but across all age groups. For example, the mortality rate for persons aged 55 to 64 with 13 years or more of education is lower than the mortality rate for persons aged 45 to 54 and 55 to 64 with either 12 or 0 to 11 years of education.

## CAUSES OF HEALTH DISPARITIES

Research suggests at least four general sets of factors leading to the development of U.S. health disparities by gender, race or ethnicity, and educational level during the working-aged years: (a) biological factors; (b) behavioral causes; (c) psychosocial factors; and (d) differential access to health-promoting resources across sociodemographic groups.

Biological factors, for example, have been linked to health disparities by gender (Waldron, 1983). The most obvious example is that women are exposed to both common and severe health-related risks associated with pregnancy and childbirth, whereas men are not. Historically, mortality rates among women during the childbearing ages were strongly influenced by risks associated with pregnancy and childbirth; fortunately, this is no longer the case. Women are also protected, in part, from some infectious diseases and circulatory diseases during early adulthood because of the presence of estrogen, whereas men are more likely to be characterized by the harmful effects of the accumulation of fat in the abdominal region (Waldron, 1993). Biological factors are thought to have much less of an impact on either racial and ethnic or educational disparities in health during the working-aged years.

Behavioral factors across sociodemographic groups can also produce health disparities. Cigarette smoking is an excellent example. Convincing research shows that heavier smoking by men than women had a major impact on gender-specific health disparities in the United States, resulting in much higher male mortality when compared to female mortality throughout the 20th century. The impact of smoking on male-female mortality disparities peaked in the 1970s and has been declining since (Preston & Wang, 2006). At the same time, smoking is becoming increasingly concentrated among persons with lower education in the United States. Correspondingly, some U.S. health and mortality disparities among the working-aged population appear to have widened quite considerably in more recent years; that is, smoking-related illness and deaths are now much less frequent among the higher educated than the lower educated. Such wide health and mortality differences by educational level are reflected in Tables 1 and 2.

An array of psychosocial factors also affect health disparities during the working-age years. One important example is the experience of racial or gender discrimination—whether racism and sexism are encountered at the individual level, within U.S. social institutions, or both—which can influence the health of racial or ethnic and gender groups. The loss of resources associated with racism and sexism (e.g., lower income) and the psychological stresses of dealing with racism and sexism have been shown to be important in the development of health disparities across U.S. sociodemographic groups (Krieger, Rowley, Herman, Avery, & Phillips, 1993). Another important psychosocial factor that influences health disparities is that higher educated individuals perceive a greater sense of control over their lives than lower educated individuals. A greater sense of control assists highly educated persons in making healthier decisions and in dealing more effectively with life's stresses in comparison to individuals with lower levels of education (Mirowsky & Ross, 2003).

Differential access to health-promoting resources is the fourth set of causal factors underlying U.S. working-aged health disparities (Link & Phelan, 1995). Persons with low levels of education, for example, are less likely to have access to steady, high-paying jobs with health insurance benefits in comparison to persons with low levels of education. Thus, stresses associated with bouts of underemployment or unemployment, less income with which to purchase nutritious food and live in a safe neighborhood, and the lack of health insurance can all lead to lower levels of health and higher levels of mortality among the less educated. Further, differential access to health-promoting resources does not begin in adulthood. For example, non-Hispanic Black, Hispanic, and American Indian children are much less likely to grow up in affluent neighborhoods than non-Hispanic White and Asian-American children in the United States (Massey, 2001). This residential segregation structures the later educational, occupational, housing, and health care opportunities that different sociodemographic groups experience and, thus, can have very important impacts on the development of health disparities throughout the life course.

### CONTINUED RESEARCH NEEDS

There is a continuing need to better understand and address U.S. health disparities within the working-aged population. Using the most general measures available, health disparities by gender, race or ethnicity, and education continue to be wide in the United States and have been stubbornly resistant to closing in spite of the priority of this topic set by the U.S. Department of Health and Human Services. Perhaps the greatest challenge for both future researchers and policy makers is not to approach health disparities on an outcome-by-outcome or disease-by-disease basis, but as disparities that are structured in fundamentally social ways, both across generations and over the life course. Given that gender, race or ethnicity, and educational attainment all continue to structure opportunities and constraints in very important ways throughout the life course and even across generations, research and policy priorities in this area might best be focused on how and why these sociodemographic factors continue to have the social impact that they do and what, in turn, can be done to minimize or eliminate the constraints faced by groups that are the most disadvantaged.

**SEE ALSO** Volume 2: *Health Care Use, Adulthood; Health Behaviors, Adulthood; Health Insurance; Income Inequality; Policy, Health; Poverty, Adulthood; Racism/Race Discrimination;* Volume 3: *Health Literacy.*

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## HEALTH INSURANCE

Health insurance refers to protection against the costs of health care arising from illness or injury. The specific expenses covered by health insurance differ widely, but in general the costs to individuals and families of routine, emergency, and critical health care are covered all or in part by the insurer. In most developed countries, this coverage is mandatory. It can be provided by private companies (operating for profit or not) or by government programs; most countries' health systems rely on a mix of both sources of coverage. Payment for insurance depends on the provider: Private insurers generally collect premiums from individuals and employers, whereas public insurance is often funded through general taxation or salary deductions.

Since the advent of the British National Health Service in 1948, the role of health insurance in producing or ameliorating socioeconomic inequities in health has been of great interest. Based on the widely held assumption that a great part of social inequities in health stemmed from unequal utilization of modern medical care, the most obvious solution to reduce these inequities appeared to be the elimination of inequities in access to medical institutions (Robert & House, 2000). As such, universal, mandatory health insurance coverage and, in certain cases, national health systems were the prime ways by which societies hoped to mitigate the effects of social inequalities on health (Acheson, 1998). While it has since

been recognized that health insurance is not a sufficient condition to eliminate socioeconomic inequities in mortality (Townsend, Davidson, & Whitehead, 1992) evidence indicates it keeps them in check. Indeed, in countries such as the United States that still do not guarantee health insurance coverage to all their citizens, social inequalities in health are often amplified, with dire consequences for health across the life course.

## PUBLIC AND PRIVATE HEALTH INSURANCE AND INEQUALITIES IN HEALTH

At the national level, the organization of health insurance can affect social inequalities in health through two interrelated mechanisms: whether health insurance is mandatory and the methods for setting rates. By definition, mandatory insurance ensures that no individual is left uninsured, with two important implications for equity: Sick individuals cannot be denied health insurance, and healthy individuals cannot remove themselves from the risk pool. The United States constitutes an exception among developed countries because it does not provide mandatory insurance. Globally, however, the question of how insurance costs are established is the most salient issues for insurance equity across the life course.

The most equitable situation occurs when the cost of health insurance is a function of one's income or salary. This progressive taxation policy favors the most deprived segments of the population, by providing them with the same (or more) services for less money than the wealthiest segments (O'Donnell, van Doorslaer, Wagstaff, & Lindelow, 2008). This is particularly important considering that deprived groups also tend to accumulate the most heath problems and therefore have the greatest need for health services. This type of cost setting is characteristic of public insurance schemes.

At the other end of the spectrum are costs established on the basis of competitive risk rating—that is, according to the relative risk of ill health of the person to be insured. For all but those with the lowest risks, this practice leads to the "inverse coverage law" whereby those who need coverage the most get the least or must pay more for it out of pocket (Light, 1992). Finally, given equal risk, the breadth of coverage can often be increased with higher premiums, meaning that coverage is a function not only of medical characteristics but also of socioeconomic factors. This type of cost setting is characteristic of private insurance schemes.

As such, compared with public insurance, private insurance may contribute to social differentials in health by compounding the positive effects of socioeconomic position on health. In contrast, coverage through public means should mitigate socioeconomic differentials in health as it can remove—and even reverse through progressive taxation—one pathway whereby advantaged socioeconomic positions may contribute to better health. Theoretically, public insurance should therefore reduce the total effect of social position on health.

## EMPIRICAL EVIDENCE

Very few studies have explicitly contrasted the impact of risk rating versus other costing methods on health and social inequalities in health. This question poses the empirical challenge of obtaining data before and after—that is, a "natural experiment" involving a radical change in national health system policy. Unfortunately, there are scant data on such transitions, and they typically are limited to aggregate-level contrasts, as these policies tend to affect whole populations, thus precluding analysis at the individual level. Thus, attributing causality to this specific health policy change is difficult, as it rarely occurs in isolation from other social changes.

The Black Report (Townsend, Davidson, & Whitehead, 1992) probably constitutes the most well-known study to shed some light on this topic. This landmark report revealed that social inequalities in health and mortality had not diminished since the implementation of the National Health Service in the United Kingdom, but had instead increased (Townsend, Davidson, & Whitehead, 1992). Yet part of this growing gap was attributable to improvements in mortality among the wealthier classes, and not to declines among the lower socioeconomic groups. This suggested that the upper classes were making greater (or somehow "better") use of the improved access to medical resources. Note, however, that the Black Report was measuring socioeconomic

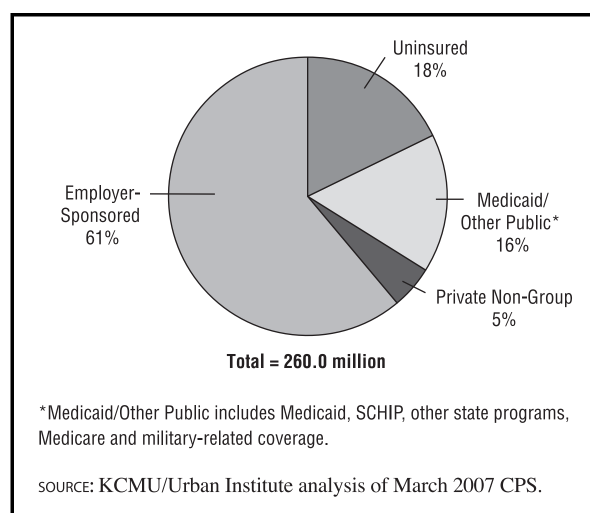


***Figure 1.*** *Health insurance coverage of the nonelderly population (under the age of 65), 2006.* CENGAGE LEARNING, GALE.

status through an occupational class schema, and not through income, which precluded the estimation of the aforementioned hypothesized redistribution effects.

In contrast, other studies that made use of the Canadian experience in developing a one-payer public system found that access to care among the poor increased substantially after the introduction of national health insurance (Enterline, Salter, McDonald, & McDonald, 1973; McDonald, McDonald, Salter, & Enterline, 1974). Moreover, it appears that this increase in access also translated into improved health outcomes. Hanratty (1996) found that the introduction of national insurance was associated with a 4% decline in infant mortality rates, coupled with a decrease in the incidence of low birth weight that was particularly marked among single parents. Infant mortality is more sensitive to social inequalities in health than is general, all-cause mortality (Gwatkin, 2001), suggesting that the introduction of a national health insurance system did disproportionately benefit the most destitute in Canada.

Since then a substantial international literature has developed to examine income inequities in access to medical care, to the point where the scholarly journal *Health Economics* even devoted a whole issue to this topic in 2004 (Volume 13, Issue 7). These studies generally found income inequities in access to medical care whereby low-income individuals were less likely to access specialist services, even in countries with universal coverage. The most comprehensive such study found that whereas access to general practitioners was equitably distributed in Organisation for Economic Co-operation and Development (OECD) countries, access to specialists exhibited such a pro-rich gradient that overall access to physicians appeared to favor the wealthiest segments of the population (van Doorslaer, Masseria, & Koolman, 2006). Moreover, this relationship was exacerbated in countries with private health insurance. As the authors themselves point out, however, this research speaks only to access to care, and more research remains to be done to show whether these inequities in access also translate into health differentials.

## IN THE ABSENCE OF MANDATORY HEALTH INSURANCE: THE CASE OF THE UNITED STATES

The U.S. health insurance system is unique among developed countries by not providing a guarantee of universal health insurance coverage for its citizens (Fried & Gaydos, 2002). Indeed, the vast majority of the adult population in the United States relies on private coverage through employers, and "holes" still exist that create a substantial—and increasing—uninsured population. Thus, privately insured, publicly insured, and uninsured adults coexist, but the risk of being in any of those groups is not equally distributed in the population; this has important implications for equity of access to care, and, ultimately, for the elimination of health disparities.

**A Growing Uninsured Population** After more than half a decade of stable uninsurance rates, the U.S. Bureau of the Census's Current Population Report on health insurance in 2001 reported an increase in the proportion uninsured (Holahan & Pohl, 2002; Mills, 2002), a trend that has since continued unabated (DeNavas-Walt, Proctor, & Smith, 2007). This subgroup continued to grow from 2005 to 2006, reaching an estimated 15.8% of the population, or 47 million Americans (DeNavas-Walt et al., 2007).

Most significantly, these increases were due primarily to a drop among individuals covered by employment-based health insurance (DeNavas-Walt et al., 2007; Mills, 2002; Mills & Bhandari, 2003). Finally, 90% of the growth in the number of uninsured during the early 21st century occurred among low- and middle-income households (Hoffman & Wang, 2003; Holahan & Wang, 2004).

**The Unequal Distribution of Risk of Coverage** Privately insured individuals are more likely to be employed, to be in good health, and to report higher levels of education and of income (DeNavas-Walt et al., 2007; Institute of Medicine, 2002; Mills & Bhandari, 2003). In contrast, because of the eligibility requirements for this coverage, publicly insured individuals are more likely to have incomes below $25,000 per year (Mills & Bhandari, 2003), and they are often in poor health as well (Institute of Medicine, 2002). The uninsured are a heterogeneous group, composed of a variety of individuals: those just above the eligibility requirements for public insurance, people who would qualify for public insurance but either do not know about it or do not feel that they need it, people temporarily unemployed or working part-time, and those who are working full-time in "bad jobs" that do not offer health insurance (Kalleberg, Reskin, & Hudson, 2000) or in small firms (fewer than 100 employees) that cannot afford health insurance for their employees.

Thus, the young (persons ages 18 to 24) and racial and ethnic minorities are overrepresented among the uninsured (Mills & Bhandari, 2003), chiefly as a consequence of their unfavorable position in the labor market. Nearly two-thirds of the uninsured have low family incomes (i.e., below 200% of the poverty line)—even though about 70% of the uninsured count at least one full-time worker in their household (Hoffman & Wang, 2003). Moreover, the risk of long spells (more than 12 months) uninsured is not uniformly distributed, as it is greater among individuals with low incomes, those in fair or poor health, Hispanics, and young adults (Haley & Zuckerman, 2003).

**The Relation between Health Insurance and Health** Longitudinal and cross-sectional studies of the effects of health insurance demonstrate a clear link between private health insurance coverage—especially when it is continuous—and more timely and appropriate access to care, better self-rated health, and lower mortality (Ayanian, Weissman, Schneider, Ginsburg, & Zaslavsky, 2000; Baker, Sudano, Albert, Borawski, & Dor, 2002; Hadley, 2003; Institute of Medicine, 2002; Quesnel-Vallée, 2004; Short, Monheit, & Beauregard, 1989; Sudano & Baker, 2003). Uninsured Americans receive fewer services and have lower utilization rates than insured individuals because they generally cannot afford either private health insurance premiums or out-of-pocket medical care costs (Seccombe & Amey, 1995; Short et al., 1989). Moreover, the length of time uninsured is also associated with increasing barriers to access to care (Haley & Zuckerman, 2003).

Thus, it appears that the U.S. exception of not mandating health insurance for all its citizens has a strong potential to put an increasingly large proportion of Americans at risk of ill health. Moreover, as the uninsured tend to come disproportionately from groups that are already socially disadvantaged, this policy also has the potential to contribute to social inequalities in health in the United States.

## GAPS IN RESEARCH KNOWLEDGE AND POLICY IMPLICATIONS

The limitations of this emerging body of literature point toward directions for future research. With regard to the contribution of private and public insurance to social inequalities in health, a first limitation is the widespread use of data for countries or geographic units within countries, which limits causal inference and does not usually permit the measurement of within-country inequities. Additionally, many of these studies measure income quite crudely, and often stop at classifications above or below the median country level (e.g., Blendon et al., 2002). This limits the comparison of fine-grained associations between countries as well as the assessment of individuals' life course income trajectories. Another limitation is the tendency to rely on mortality or access to care as measures of health outcomes, instead of morbidity or health-related quality of life. Finally, as highlighted by van Doorslaer and Jones (2004), even state-of-the-art research on these issues has lacked comparative individual-level longitudinal data that would enable the assessment of causal relationships and the evolution of these processes over the life course of individuals.

While the evidence on the public/private mix of insurance and its impact on social inequalities in health has global policy implications for equity, the United States faces the special challenge posed by its lack of mandatory coverage. Indeed, as mentioned earlier the young (ages 18 to 24) and racial and ethnic minorities are overrepresented among the uninsured (Mills & Bhandari, 2003), and this is likely to have a substantial impact on their health. Keppel (2007) identified the ten largest health disparities in the United States, finding that the bulk were related to social inequalities and lack of access to monitoring or testing. Given that the second goal of the federal government's "Healthy People 2010" program is the elimination of health disparities, it appears that ensuring equitable access to care for the uninsured is not simply a lofty ideal, but a pressing necessity.

**SEE ALSO** Volume 2: *Health Care Use, Adulthood; Health Differentials/Disparities, Adulthood; Income Inequality; Policy, Health; Poverty, Adulthood.*

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# HOME OWNERSHIP/ HOUSING

Several key life course transitions, such as leaving home and beginning to cohabit with a partner, also can be considered household transitions because they involve movements between households, the creation of a new household, or the dissolution of a household. Because a household typically is defined as a group of individuals who share a dwelling space, these household transitions are also housing transitions for at least some of the individuals involved. Those persons relocate physically from one housing unit (e.g., an apartment, house, or mobile home) to another. They also may change their housing tenure, that is, whether they own the dwelling, pay rent to live there, or have another arrangement.

In addition to the close practical link between household transitions and housing transitions, housing has a reciprocal relationship with other life course transitions, such as having a child, in that a life course transition may require a change in housing (e.g., to get more space) or may not occur until appropriate housing has been secured. Finally, transitions between housing situations can be considered life course transitions in their own right because they enhance or limit people's opportunities.

## HOUSING CHARACTERISTICS

Housing circumstances are differentiated by a variety of characteristics that are influenced strongly by local and national housing policies. One distinction is between institutional or group housing (military barracks, college dormitories, jails, hospitals, monasteries, etc.) and housing that consists of private households. Transitions into and out of group housing can mark important events in the life course, but these transitions usually involve either relatively small proportions of the population or relatively short periods in the life course. In the North American context most housing transitions involve private households.

**Tenure** Housing consisting of private households can be differentiated by tenure, structure, and neighborhood

characteristics. Tenure reflects the social organization of property and establishes rights regarding housing. In North America tenure mostly is divided between rental housing and owner-occupied housing, though there are other categories, including cooperative housing. Those living in rental housing are tenants who pay rent to landlords in exchange for their housing. Depending on local regulations, renters often have limited rights with respect to privacy and few guarantees regarding the stability of their living quarters. However, moving between rental dwellings is relatively easy, leaving renters with more flexibility to move than owners have. Rental housing usually is controlled by the private sector in North America, with considerably smaller ownership by the public (government-run) and nonprofit sectors.

Households that live in owner-occupied housing serve as their own landlords; these owners typically have greater rights to privacy and more stability in their living circumstances than do renters. However, because buying and selling real estate is a much more involved process than renting, there are higher transaction costs associated with moving for owners and correspondingly less flexibility. In the North American context transitions into ownership usually are financed by arranging a loan, or mortgage, from a lender. The dwelling serves as collateral for the loan and may be repossessed if the owner falls behind on the payments (Lea, 1996). Mortgage payments are often higher than rental payments but eventually act as investments, whereas rent does not. As a result of building equity in their housing investment, home owners usually attain wealth faster than renters do. In the United States tax advantages are provided to home owners, further increasing their ability to accumulate wealth relative to renters (Chevan, 1989).

**Structure** Housing also can be differentiated by structure. Key distinctions based on structure typically relate to the number of households that share the same building and walls. Thus, housing can be detached (or single-family), with one household completely separated from all others; attached or semiattached (e.g., town houses, row houses, duplexes), where dwellings share walls but are otherwise freestanding with separate street-level entrances; or multiunit (apartment buildings). Apartment buildings usually are differentiated into low-rise and high-rise buildings, depending on the number of floors they contain. Other aspects of housing structure also vary, including total floor space, number of bedrooms, number of bathrooms, age, state of repair, and presence and characteristics of kitchens. Some of these aspects, such as number of rooms, are particularly important for the measurement of household-level concepts such as residential crowding (Myers & Baer, 1996).

**Neighborhood** Housing also can be differentiated by neighborhood. Neighborhood 1ocation is a key factor in most housing decisions because neighborhoods differ in distance from work and availability of services and amenities (Dieleman & Mulder, 2002). The structure and costs of different types of housing vary by location, and housing transitions frequently involve movement between neighborhoods. Overall, housing structure is closely related to housing tenure in North America, so that most detached single-family housing is owner-occupied (Rossi & Weber, 1996). Structure of housing also is linked to neighborhood. Roomier single-family housing often dominates low-density rural and suburban neighborhoods, and smaller apartments in multiunit buildings typically predominate in higher-density urban neighborhoods (Rossi & Weber, 1996).

## HOUSING, SOCIAL STATUS, AND HISTORICAL TRENDS

Housing structure, tenure, and neighborhood are closely related to social status both in North America (Gans, 1967; Perin, 1977) and elsewhere (Rowlands & Gurney, 2000; Bourdieu, 2005). C. Perin (1977) remarked on the implicit existence of a housing ladder. Individuals are presumed to enter a rental market after leaving the parental home, thus starting at the base of the ladder. Then they gradually climb the ladder, building wealth and status as they obtain owner-occupied housing and move to more desirable neighborhoods. Owner occupation of a detached single-family home in a residential neighborhood is considered the most desirable housing situation (Rossi & Weber, 1996). Consequently, owners often are considered more trustworthy, stable, and responsible than renters (Rowlands & Gurney, 2000). Despite popular perceptions, a review by P. Rossi & E. Weber (1996) found few consistent social benefits (meaning benefits to society) to home ownership.

As a result of the associations between housing and social status, the transition into home ownership is significant for many people. It frequently is viewed as one of the transitions that define responsible adulthood (Henretta, 1984). Policymakers in a variety of contexts also have taken an interest in encouraging home ownership. In the United States tax policies and policies regulating the extension of credit have encouraged transitions into home ownership (Chevan, 1989). Nevertheless, sharp distinctions in access to home ownership remain, separating the economically advantaged from the disadvantaged (Lauster, 2007).

**Improvements in Housing** Housing conditions and trends differ from place to place, but a few broad historical trends can be identified. Average household size has

declined dramatically in North America and Europe over the long term, leaving fewer people sharing the same amount of housing space. According to U.S. Census data, average household size decreased from approximately 4.5 people per private household in 1900 to 2.5 in 2005 (Ruggles, Sobek, Alexander, Fitch, Goeken, Hall et al., 2004). In that period home ownership rose, with an estimated 46% of households owning in 1900, compared with 67% in 2005 (Ruggles et al., 2004). Most of the increase in home ownership in the United States occurred after World War II (Chevan, 1989). The proportion of households living in roomier dwellings and in detached dwellings also rose during that time (Lauster, 2007). All these trends suggest a gradual improvement in North American housing standards, with fewer people living in crowded housing and more people living at the top of the housing ladder.

**Unequal Distribution of Housing** Improvements in housing standards have not been distributed equally. In the market-dominated model of housing provision that prevails in North America, households with little savings or income have been left without access to more valued forms of housing. Several trends have combined to widen housing disparities since the 1970s. Rising income inequality coinciding with rising housing prices has contributed to widening disparities in access to housing (Piketty & Saez, 2003; Lauster, 2007). At the same time incentives for developers to build new rental housing largely have disappeared, leaving little new housing stock available to those at the lower end of the income range (Erikson. 1994). These trends, coupled with a movement toward deinstitutionalizing those with mental and physical disabilities, have led to a marked rise in substandard housing and homelessness for those marginalized by the market (Burt, 1991).

Estimates of the number of homeless in North America range from hundreds of thousands to several million (Erikson, 1994; Shlay & Rossi, 1992). As the number of homeless people has increased, the composition of the homeless population has changed (Rossi, 1989; Phelan & Link, 1999). Whereas the homeless once were mainly White middle-aged single men (Erikson, 1994; Swanstrom, 1989; Hoch & Slayton, 1989; Cohen & Sokolovsky, 1989), they have become more diverse and include women, children, and families of various ethnic backgrounds (Shlay & Rossi, 1992). The homeless are also more visible throughout cities (Rossi, 1989) as well as being poorer and younger and are affected by various medical, criminal, and social problems (Erikson, 1994; Gelberg & Linn, 1989; Lee & Schreck, 2005). Various life course events influence the likelihood of becoming homeless, but analysts emphasize that the primary cause is the inability of people to compete for housing in the face of a shrinking supply of low-cost housing (Erikson, 1994). The disadvantages created by homelessness, including loss of opportunities, feelings of helplessness, and general social stigma, have long-term implications for the life course of homeless individuals.

In addition to the ways in which the poor have been disadvantaged by the market provision of housing, other groups have been disadvantaged by direct discrimination. In the United States, historically, Black Americans in particular were often prevented from living outside designated Black neighborhoods. Black Americans also often were denied loans to purchase housing, the major route for building wealth in North America. The Fair Housing Act of 1968 penalized discrimination on the basis of "race, color, religion, or national origin," but few means of enforcement were included in the act (Schill & Friedman, 1999). In 1988 a set of amendments strengthened the act and also barred discrimination against "families with children and ... persons with physical or mental disabilities" (Schill & Friedman, 1999).

Despite efforts to reduce discrimination in housing in North America and elsewhere, neighborhood segregation is widespread, especially by ethnicity and race (Massey & Denton, 1993; Wilkes & Iceland, 2004). L. Freeman (2000) provided three explanations for the persistence of segregation: the spatial assimilation model, which links segregation to impoverishment and broader lack of housing opportunities (Massey 1985); the place stratification model, which states that direct discrimination continues to limit opportunities for minority group members (Alba & Logan, 1993); and the residential preferences model, which argues that much of segregation can be explained by minority households choosing to live near one another (Schelling, 1971). Freeman found evidence for each of those models.

## HOUSING AND LIFE COURSE TRANSITIONS

Housing characteristics, including tenure, structure, and neighborhood, can influence a number of specific life transitions. These effects are often reciprocal, so that life course transitions also influence housing transitions (Mulder & Wagner, 1998; Lauster & Fransson, 2006).

Neighborhood effects on life course transitions have received increased attention (Sampson, Morenoff, & Gannon-Rowley, 2002). For example, neighborhoods influence the likelihood of risky behavior and exposure to violence (Kowaleski-Jones, 2000; Sampson et al., 2002), the timing of first sex (Baumer & South, 2001), and family formation (South & Crowder, 1999).

Life course events also can influence neighborhood choice. For instance, coming out in the life course of gays and lesbians often is accompanied by a choice to live in

gay enclaves (Weston, 1991). These communities allow gays and lesbians to share stories and develop histories, feel accepted, exert political and social power, and meet others who are similar (LeVay & Nonas, 1995; Sutton, 1994; Weeks, Heaphy, & Donovan, 2001; Weston, 1991). This process is similar to the residential preference model of segregation discussed by Freeman (2000). In this case the gay community is not necessarily created to separate homosexuals and heterosexuals but is a method for protecting individuals' quality of life.

Similarly, having school-age children can influence neighborhood choice, at least for those with the ability to choose. In addition to neighborhood moves based on minimizing the risks children face, parents may move to further educational achievement and improve social status (Croft, 2004). As J. Holme (2002) noted, these moves often are based on social constructions of school status, combining perceptions of neighborhood class and racial composition with measurements of performance. In turn, neighborhood school status boosts the price of local housing (Kane, Staiger, & Samms, 2003; Croft. 2004), and that also limits neighborhood choice.

Research shows that access to housing, housing tenure, and housing structure are reciprocally related to life course transitions. Access to housing seems to influence both the likelihood that new households will be formed and the form new households take (Mutchler & Krivo, 1989; Hughes, 2003). Some authors argue that limited access to housing increases the likelihood of nontraditional living arrangements, including extended family living and nonmarital cohabitation (Mutchler & Krivo, 1989). Other authors have found evidence that securing high-quality housing serves as a culturally important prerequisite for both traditional (Hughes, 2003) and nontraditional (Lauster & Fransson, 2006) forms of family formation. Increased access to all forms of housing may allow more people to live alone (Kobrin, 1976; Lauster & Fransson, 2006). Securing access to a detached roomy dwelling also may be linked to childbearing in the United States (Lauster, 2007). Conversely, marrying or having children before owning a detached roomy dwelling makes individuals more likely to move to this type of housing (Chevan, 1989; Mulder & Wagner, 1998; Clark, Deurloo, & Dileman, 1997; Lauster & Fransson, 2006).

Although the overall level of mobility between dwellings varies widely across countries, the age pattern of moves is broadly the same (Dieleman & Mulder, 2002). Most housing transitions occur during young adulthood, reflecting the relative instability of the transition to adulthood and its many life course transitions. Rates of residential mobility begin to taper during middle age (Dieleman & Mulder, 2002). Nevertheless, important relationships between housing and later life course transitions remain.

Some researchers have provided evidence that home ownership reduces the risk of divorce, at least on the individual level, because ownership represents a shared investment in a marriage (Murphy, 1985). Others argue that the likelihood of separation is increased in contexts in which single-family homes dominate, preventing the development of supportive communities (Bratt, 2002; Lauster, 2005). Late in life transitions in housing circumstances usually reflect retirement or changes in caregiving arrangements (Dieleman & Mulder, 2002). The move from independent housing to retirement communities or assisted living facilities can be particularly traumatic (Adams, Sanders, & Auth, 2004), leaving many people to age in place (remain in their own homes as they age). However, aging in place may result in deterioration of the dwelling if individuals are unable to make repairs (Golant & LaGreca, 1994).

Housing transitions may lead to or result from a variety of household transitions. Housing serves as one of the key links between life course transitions and the economy. Access to housing is also heavily influenced by policy makers. As a result, housing policy can have large effects on how people proceed through a host of life course transitions. By placing individuals, housing also links the life course to neighborhoods and to the environment. This is important for understanding neighborhood effects on the life course as well as the impacts of life course transitions on the environment. Overall, although most housing transitions take place early in the life course, housing intersects with and shapes the life course at all ages.

**SEE ALSO** Volume 2: *Consumption, Adulthood and Later Life; Debt; Homeless, Adults; Neighborhood Context, Adulthood; Residential Mobility, Adulthood; Segregation, Residential;* Volume 3: *Wealth.*

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## HOMELESS, ADULTS

Completely accurate and comprehensive documentation of the pervasiveness of homelessness is nearly impossible for many reasons. Not only is the number of individuals who are homeless a matter of contention, but defining homelessness also is a contentious matter. Many studies measure only the *literal homeless*, defined as persons who live in emergency shelters or transitional housing, or those who sleep in places not meant for human habitation (e.g., streets, parks, abandoned buildings, and subway tunnels). Other researchers include in their counts of the homeless those persons who are *precariously housed* or on the brink of homelessness. They may be doubled-up with friends or relatives or may pay extremely high proportions of their resources (more than one-third of monthly income) for rent—thus, they are often characterized as being at imminent risk of becoming homeless (U.S. Department of Housing and Urban Development, 2007). In addition, the population of homeless referred to as the *hidden homeless* further complicates scholars' understanding of the extent of homelessness. The hidden homeless are those who are living in automobiles, campgrounds, abandoned structures, or boxes—that is, places that it would be extremely difficult for researchers to locate.

Enumeration of the homeless is difficult and is usually conducted in one of two ways. One way that the number of homeless persons has been documented is a point in time (PIT) count. The PIT count occurs when the number of persons who are sheltered (in a shelter or transitional housing) or unsheltered (living in the streets, automobiles, or other public or private place not designed for regular sleeping accommodations) are counted. The problem with this method of documenting homelessness is that a PIT count is representative of individuals and families who were homeless for one specific night and excludes those who may be homeless the next night or the next. Another method of documenting the homeless that is often used is period prevalence counts (PPC). PPCs are counts that determine the number of people who are homeless over a given period of time, utilizing longitudinal data. Longitudinal data are data that are collected over a predetermined amount of time and document unduplicated numbers of persons who have used emergency and/or transitional housing during this time period. This type of enumeration of the homeless provides a more accurate portrait of homelessness than the PIT estimates, because whereas PIT data do capture a higher share of homeless individuals and families who use shelters or transitional housing for long periods of time, PIT estimates underrepresent people whose homelessness is episodic. Using PPC is more costly and takes longer to obtain data, however. So although PPC does provide more information, this method also has limitations.

Despite the many challenges of enumeration, researchers estimate that over the course of a lifetime, approximately 9 to 15% of the U.S. population will experience homelessness (Ringwalt, Greene, Robertson, & McPheeters, 1998; Robertson & Toro, 1999). Homelessness is an event that may occur at any point along the life course with each stage offering a unique set of challenges, depending on how or where one views him/herself on the life-course trajectory. Each year, more than 3 million people are believed to experience homelessness, including 1.3 million children (National Law Center on Homelessness and Poverty, 2008).

### WHO IS HOMELESS?

Researchers estimate that on average, single men comprise 53% of the sheltered homeless population (compared to 14% of the U.S. population), single women 17% (compared to 16% of the U.S. population), unaccompanied youth 3% (compared to 5% of the U.S population), adults in households with children 10% (compared to 47% of all U.S. households having children), and children in households with adults 17% (compared to 23% of the U.S. population). Single men, then, are highly overrepresented among the homeless. The sheltered homeless population is estimated to be nearly 44% African American (African Americans represent 13% of total U.S. population), 34% White non-Hispanic (White, non-Hispanic persons represent 66% of total U.S. population), 13% White, Hispanic/Latino (Hispanic and Latino persons represent

15% of total U.S. population), and 9% other (others represent 6% of total U.S. population; U.S. Bureau of Census, 2008b; U.S. Department of Housing and Urban Development, 2008).

### SINGLE MEN

Single men (i.e., men who have never been married, divorced, or widowed) who are poor may be particularly vulnerable to homelessness because the largest social programs are targeted toward families, especially mothers and children (Temporary Assistance to Needy Families), or toward the elderly (Social Security). Single men are more likely to have substance abuse problems that make it less likely that friends or family will take them in. Single men also may feel less vulnerable on the streets or in shelters, so they may be less likely to be doubled-up with friends or family to avoid living on the street (U.S. Department of Housing and Urban Development, 2008). Single men also have been found to be socially isolated, transient, and homeless for longer periods of time than other subgroups of homeless (Roth & Bean, 1986). They often have histories of legal problems and marital trouble (First & Toomey, 1989) and often are veterans (U.S. Department of Veterans Affairs, 2008).

About one-third of the adult homeless population in the United States has served their country in the armed services. Current population estimates suggest that about 154,000 veterans (male and female) are homeless on any given night and perhaps twice as many experience homelessness at some point during the course of a year (U.S. Department of Veterans Affairs, 2008). Almost all (97%) homeless veterans are male (just 3% are female); the majority are single, and most come from poor, disadvantaged backgrounds. About 45% of homeless veterans suffer from mental illness and slightly more than 70% experience alcohol or other substance abuse disorders. Currently, the number of homeless Vietnam veterans is greater than the number of service members who died in the Vietnam war. Additionally, a small number of Desert Storm veterans have appeared in the homeless population. The U.S. Department of Veterans Affairs has developed several initiatives to provide services to this population, one of which is the Grant and Per Diem Program, which is offered annually by the U.S. Department of Veterans Affairs to fund transitional housing or service centers for homeless veterans.

### SINGLE WOMEN

Another recognized subpopulation of the homeless is single women (17% of sheltered homeless). Single women are generally older, White women with relatively high levels of individual dysfunction such as mental illness, substance abuse, or physical disability (Johnson, 1995; U.S. Conference of Mayors, 2007). Compared to women with children, single childless women are more likely to have been homeless for a longer period of time, more likely to have received mental health services, and more likely to admit to substance abuse problems (Robertson, 1991).

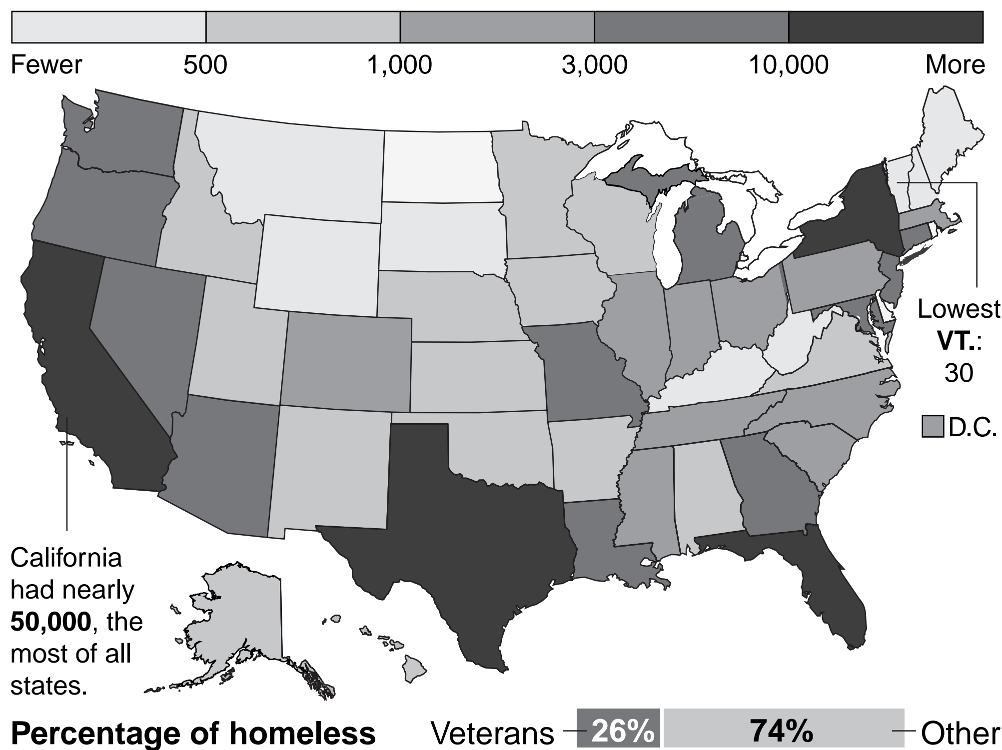
### WOMEN WITH CHILDREN

Women with children are considered the fastest growing subgroup of the homeless (National Alliance to End Homelessness, 2007; National Coalition for the Homeless, 2007; U.S. Conference of Mayors, 2007). One of the factors that contribute to this growing subpopulation of the homeless is the poverty rate. Beginning in 2000, the poverty rate rose for 4 consecutive years, from 11.3% in 2000 to 12.7% in 2004. The poverty rate then began to decline slightly, to 12.6% in 2005 and 12.3% in 2006. So although there was a decline in the poverty rate from 2005 to 2006, the change from 12.6% (2005) to 12.3% (2006) was not statistically significant (U.S. Bureau of Census, 2008).

Other characteristics that may contribute to the vulnerability of women include declining wages, a slowing economy, declining welfare rolls (more likely due to the time limits placed on benefits in 1996, rather than an indicator of improvement in the economic well-being of low-income women), loss of social benefits, loss of health insurance, and the limited availability of both affordable housing and subsidized housing. Subsidized housing is so limited that fewer than one in four Temporary Assistance to Needy Families nationwide lives in public housing or receives a housing voucher to assist with rent (National Coalition for the Homeless, 2007). Finally, domestic violence also contributes to homelessness among families. When women leave abusive relationships, often they have no place to go. Due to the lack of affordable housing and limited supply of subsidized housing, many women are forced to choose between the abusive situation or living on the streets. Estimates of rates of domestic violence for homeless women with children range from 12% to 50% (Homes for the Homeless, 2008; National Coalition against Domestic Violence, 2001; U.S. Conference of Mayors, 2007).

### CHRONICALLY HOMELESS

Chronic homelessness is described as an unaccompanied homeless individual with a disabling condition who has either been continuously homeless for a year or more or has had at least four episodes of homelessness in the past 3 years. To be considered chronically homeless, a person must have been on the streets or in emergency shelter (i.e., not in transitional or permanent housing) during these stays (U.S. Department of Housing and Urban Development, 2008). The U.S. Department of Housing and Urban Development estimates that approximately

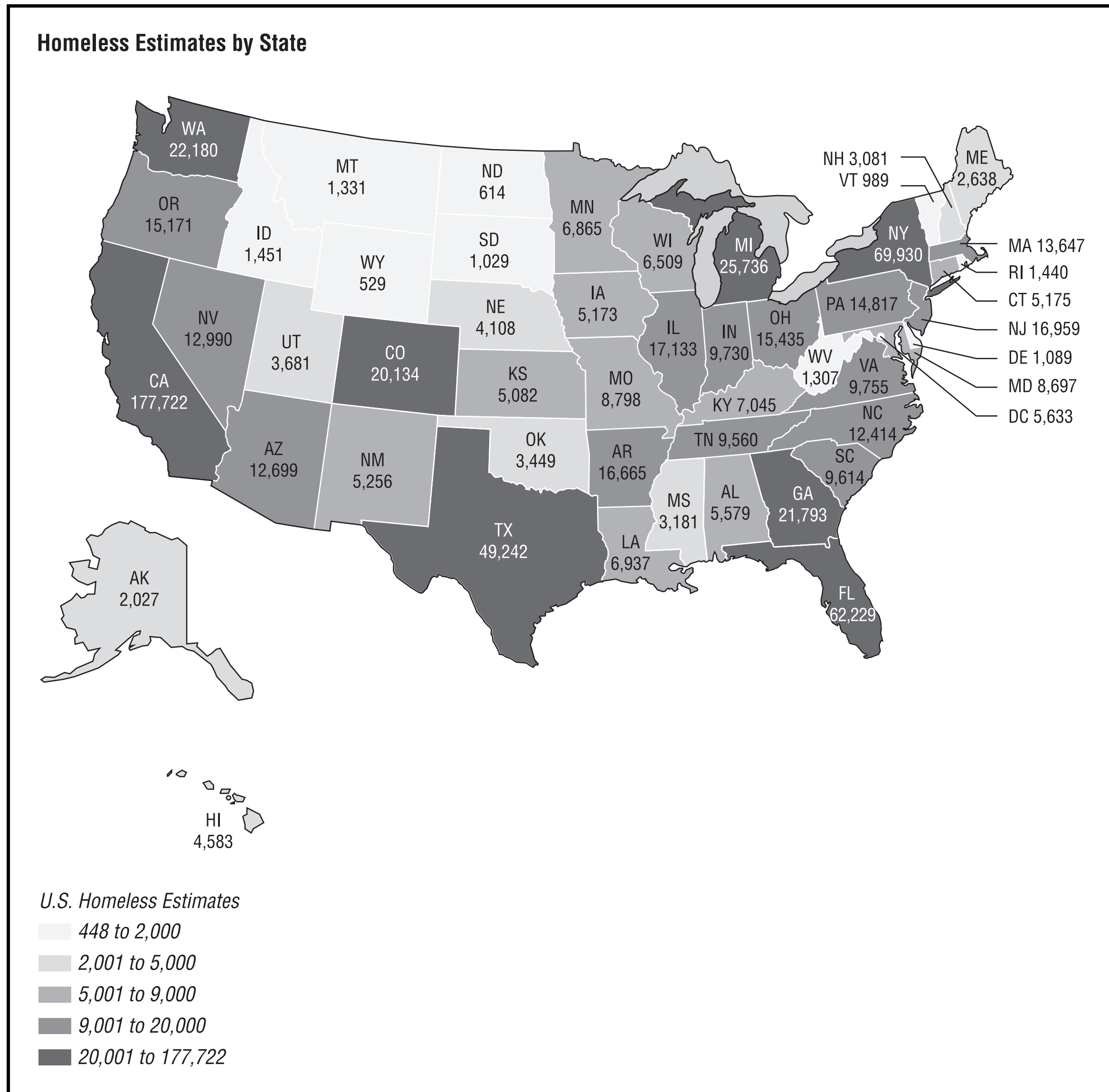



*Homeless Veterans.* *U.S. map shows the number of homeless veterans in 2006.* AP IMAGES.

20% of all homeless persons could be considered chronically homeless. Communities are working to end chronic homelessness by providing services to help meet the needs of this vulnerable population. However, these services—including mental health treatment, substance abuse treatment, intensive medical care, and incarceration—tend to be very expensive.

## HOMELESS OLDER ADULTS

The growing consensus is that homeless persons ages 50 and older comprise the "older homeless" category. Homeless persons ages 50 to 65 frequently fall between the cracks in that they are not old enough to qualify for Medicare, therefore many suffer from poor physical health given that they most likely have experienced poor nutrition and severe living conditions (National Coalition for the Homeless, 2007). Increased homelessness among older adults is largely due to the declining availability of affordable housing. Throughout the nation, there are at least nine seniors waiting for every occupied unit of affordable elderly housing (HEARTH, 2008). Many elderly are retired and on fixed incomes, or dependent on Supplemental Security Income for support in their retirement. Still, homeless persons are far less likely than their housed peers to survive until later life. People who experience homelessness for long periods of time do not survive to age 62 as often as persons in the general population; this may account for older adults' relatively small percentage (16%) among the homeless (U.S. Department of Housing and Urban Development, 2008). The average life expectancy of a person without permanent housing is estimated to be between 42 and 52 years, far below the United States' average life expectancy




***Map 1.*** *Homeless estimates by state.* CENGAGE LEARNING, GALE.

of 80 years. A study by O'Connell (2005) indicated that premature death for older homeless persons most often resulted from acute and chronic medical conditions aggravated by homeless life rather than by either mental illness or substance abuse.

## STRUCTURAL FACTORS CONTRIBUTING TO HOMELESSNESS

**Lack of Affordable Housing** Since the 1970s or so, much of the affordable housing and single room occupancy (weekly or daily rental of economy motel rooms) housing that had been located in the central part of larger cities has been lost to development or gentrification (e.g., the conversion of rental units to condominiums, historic preservation). Funding for public housing programs has been inadequate. Historically, when money is tight the first programs and services that are cut or eliminated are social service programs. Currently, because housing is not seen as an entitlement, only one in four eligible individuals and families are receiving services from programs such as Housing Choice. Housing Choice, formerly known as Section 8, is a program administered by U.S.

Department of Housing and Urban Development that provides housing vouchers that can be used in partial rent payment for housing. These vouchers may be used for apartments, homes, or mobile homes of the family's choice as long as basic criteria are met. The vouchers also may be used for public housing units (i.e., public housing units are apartment complexes that house large numbers of low-income individuals and families exclusively).

**Foreclosure/Subprime Mortgage Crisis** Related to the lack of affordable housing is the current foreclosure/subprime lending crisis. Nationally, more than 2 million home foreclosures were reported in 2007. A home foreclosure occurs when an owner is unable to keep up with his or her monthly home payments, which include mortgage, property taxes, and interest. The resulting spiral has resulted in the decline in home values of up to 20%. This decline has perpetuated a plummet in local tax revenues that are based on property taxes (National Coalition for the Homeless, 2007). Congress and state governments are scrambling to provide some stability to the economic crisis that has ensued by crafting legislation to reinforce banks, lenders, and other financial institutions to hold off a recession. Few proposals have been made to provide relief for the homeowners who have lost their homes. Foreclosure has forced many families to move in with friends or relatives, and others have moved into emergency shelters. The National Coalition for the Homeless (2007) conducted a survey of state and local homeless coalitions and asked if they had seen an increase in individuals and families seeking shelter since the crisis began in 2007: 61% of the agencies (71 out of 117) replied that they had indeed seen an increase, which they attributed to the foreclosure crisis. Only five coalitions replied that they had not seen an increase in their area; the remaining respondents were unsure.

**Poverty** The official poverty rate in 2006 was 12.3%, slightly but not significantly down from 12.6% in 2005. Homelessness and poverty are inextricably linked. Poor people are frequently unable to pay for housing, food, childcare, health care, and education. Difficult choices must be made when limited resources cover only some of these essential necessities (National Coalition for the Homeless, 2007). Often, because housing typically comprises such a high proportion of income, it is at high risk of being dropped from an individual/family's budget. Being poor often means that a person is just a single illness, accident, or a paycheck away from living on the streets.

**Health Care** The final key issue related to the problem of homelessness is health care. Poor health is both a cause and consequence of homelessness. For individuals and families who are struggling to pay the rent, a health crisis (such as a serious injury or disability) can cause a freefall into homelessness. If an individual is unable to work, once savings (if any) are depleted to pay medical bills or rent, the next step is to double-up, find an emergency shelter, or resort to the streets. Rates of both chronic and acute health problems are extremely high among the homeless population. Conditions that require regular, continuous treatment such as tuberculosis, HIV/AIDS (estimated between 3% and 20% of the homeless population), diabetes, hypertension, addictive disorders, and mental disorders are all extremely difficult to treat or control for those with inadequate housing. Illness may cause homelessness; chronically mentally ill persons or alcoholics who are noncompliant with treatment may be cast out by their families. Alternatively, illness may be a consequence of homelessness and may result from the tough conditions of the street (e.g., inadequate shelter, inadequate diet, or possibly selling sex for money).

In 2006 nearly 47 million Americans under age 65 (15.7%) had no health insurance coverage, an increase of 2.1 million from the previous year (Kaiser Family Foundation, 2007). Further, 38 million people from working families were uninsured in 2005 because not all businesses offer health benefits, not all workers are eligible for health benefits, and many employees cannot afford their share of the health premium.

## WHAT THE FUTURE HOLDS

As the number of homeless individuals and families increase in the United States—whether as a result of mental health issues, substance abuse, disability, access to health care, inadequate education and job preparation, or domestic violence—it is clear that the problem of homelessness is a heterogeneous one. However, with all the diversity within this population, there is one thing all members have in common: lack of housing. Since the late 1990s, many pilot programs have been established throughout the United States that advocate a "housing first" approach to eradicating homelessness (Beyond Shelter, 2008). "Housing first" is an alternative to the current system of emergency shelter/transitional housing, which tends to prolong the length of time that families remain homeless. The premise of service delivery is based on the belief that vulnerable and at-risk homeless individuals and families are more responsive to interventions and social services support after they are in their own housing, rather than while living in temporary/transitional facilities or housing programs. With permanent housing, these individuals and families can begin to

regain the self-confidence and control over their lives they lost when they became homeless.

**SEE ALSO** Volume 2: *Family and Household Structure, Adulthood; Home Ownership/Housing; Policy, Health; Poverty, Adulthood.*

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***Carole Zugazaga***

# HORMONE REPLACEMENT THERAPY

**SEE** Volume 2: *Menopause*.

# HOUSEWORK

Housework is defined by social scientists as unpaid labor that contributes to the maintenance of the household. Studies frequently include as housework tasks such as laundry, cooking, dishwashing, cleaning, shopping for household goods and groceries, and making house repairs. Tasks that involve direct caretaking of family members, such as childcare, are not usually considered housework, even though the distinction between housework and other forms of care is somewhat artificial. Studies of housework not only provide an important window into gender relations in families, housework performance has also been linked to factors including wages, mental health, and relationship quality.

## THE EMERGENCE OF MODERN HOUSEWORK

Under the system of subsistence agriculture that was common throughout the world over the past several thousand years, the majority of productive work took place in or near the household. The emergence of the contemporary understanding of housework as distinct from paid employment is the direct result of the separation of paid labor from the household under systems of industrial production. The rise of industrial production during the past two centuries was accompanied by a supporting ideology of "separate spheres." This ideology emphasized the belief that women and men were fundamentally different, and it valorized women in their roles as domestic caretakers and moral guardians. Men, by

contrast, were viewed as responsible for the public sphere, and especially market work. A fundamental insight of housework research has been the realization that these two spheres are not separate, but rather are intricately interconnected. Increases in women's employment since the 1950 have heightened awareness of the linkages between paid and unpaid work and collectively demonstrated the false dichotomy that the idea of "separate spheres" represents.

A vast amount of work was required to support families in the pre- and early industrial period. Susan Strasser (1982) points out that this work frequently included making clothes by hand or sewing machine, collecting water, washing clothes by hand, gathering fuel for heating and cooking, producing meals for family members, preserving and storing food, producing sources of lighting, cleaning the house, and a substantial number of related tasks. The sheer volume and physical burden of this work has been gradually reduced by a combination of products available for purchase in the market and the spread of electrical and gas-powered appliances. At the same time, it seems likely that standards of cleanliness rose alongside the availability of such externally powered devices. For example, in 1974 Joann Vanek found little change in the amount of time spent on housework in the United States between 1925 and the mid-1970s despite the increased availability of household appliances over that time.

Although housework is frequently cast as burdensome and unpleasant, scholars increasingly recognize that it serves a dual role. As Marjorie DeVault (1991) explained, housework simultaneously produces goods for individuals and families, such as clean homes and nourished family members, and facilitates the expression of human connection. This dual meaning of housework is reflected in the emergence of the concept of "care work." Despite this dual nature, much housework research has focused on the unpleasant work that tends to be repetitive, to have a relatively rigid schedule for completion, and to be physically demanding. To the extent that such work is unpaid, many scholars have suggested that it is also undervalued socially. Indeed, the purpose of much of this research is to both highlight and recognize the crucial value of such work for the reproduction of families and larger social groups.

## STUDYING HOUSEWORK

Two related areas of social research take housework as a central focus. The first is the study of time use. Time spent on domestic labor is a central concern among researchers such as Jonathan Gershuny (2000) and John Robinson and Geoffrey Godbey (1999) who are interested in the contours of human activity across the day, the week, the year, and the life course. Along with paid employment, leisure, and self care, housework constitutes one of four key areas into which researchers generally divide human time use. The second area of research in which housework is examined is the study of gender. In this area, scholars are interested in the role of housework in defining and reflecting role differences between women and men. This second area of study has driven a remarkable increase in research on housework since the 1980s. Housework serves as both a central manifestation of gendered family roles and as a key marker of status. As a result, understanding the factors associated with performing household work as well as the consequences of its performance provides an important indicator through which changes in gender relations may be assessed.

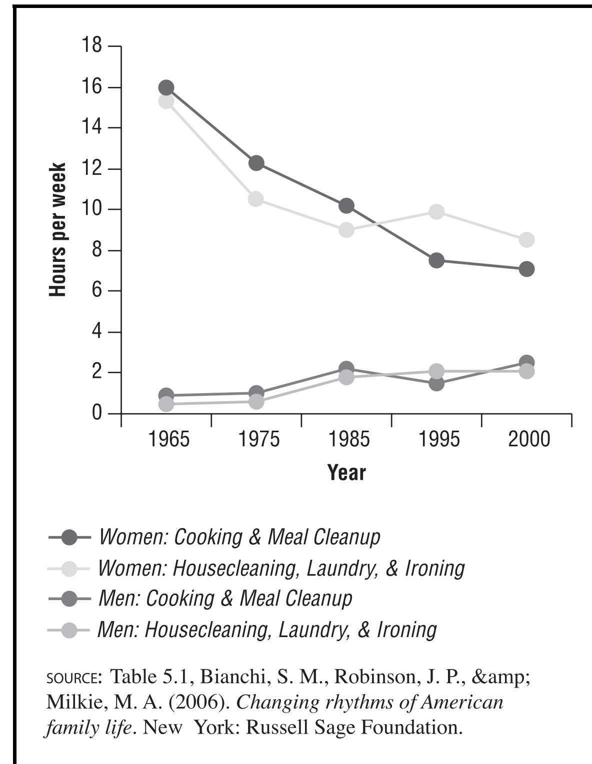
Most studies of housework draw on one of three methodological approaches. The first, and arguably most reliable, technique relies on the completion of "time diaries" by representative samples of specific populations (see Bianchi, Robinson, & Milkie, 2006). With this technique, respondents most commonly report the activities of the previous 24 hours in small time increments. Using this methodology, respondents are generally allowed to report multiple activities performed at the same time (multi-tasking). The disadvantage to this approach is that it is highly resource intensive and is burdensome to study participants, so the collection of data that could be used to explain patterns of time use has often been limited. In the United States the time diary has been utilized to study changes in time use from 1965 into the early 2000s. A growing cross-national time use archive is also available (see Gershuny, 2000).

Two less costly but more common methods for collecting data about time use include "hours estimates" and "stylized" questions about responsibility for household tasks. With the hours-estimates approach, respondents are asked to state the amount of time they spend on particular tasks (laundry, cooking, etc.) in a given day or week. The greatest drawback to this measurement strategy is that respondents tend to overestimate the time they spend on tasks. Among other problems, this approach frequently produces data in which respondents' estimates sum to more than 24 hours per day. With the stylized approach, respondents are asked to describe whether they or their spouses usually perform specific tasks. Although such data may be useful for studies of the way household tasks are divided by gender, they are less useful for studying time allocation.

## FINDINGS FROM RESEARCH ON HOUSEWORK

**Who Does the Housework?** The two most definitive findings to emerge from studies of housework based on time-diary data from the United States are (a) that women spend more time on housework than men, and

(b) that women have substantially reduced the time they devote to housework since the late 1960s (Bianchi et al., 2006. The former finding is reported in almost all studies of housework, and the latter pattern has also been documented in a large number of wealthy nations besides the United States (Gershuny, 2000). Figure 1 presents trends in time spent on meals and cleaning by married mothers and fathers from the United States between 1965 and 2000. This change has occurred over a historical period in which women's rates of employment increased dramatically. Arlie Hochschild (1989) was among the first to note the potential emergence of a "second shift" if women do not reduce their housework time in direct proportion to their time spent in the labor market. Although Bianchi and colleagues (2006) report an hour-for-hour exchange between housework and paid work in the United States, Gershuny (2000) finds that British women reduce their time spent on housework and childcare by only 30 minutes per each additional hour they spend in paid employment. This implies that in Britain women have increased their total working time as their rates of employment have risen.




SOURCE: Table 5.1, Bianchi, S. M., Robinson, J. P., & Milkie, M. A. (2006). *Changing rhythms of American family life*. New York: Russell Sage Foundation.

***Figure 1.*** *Trends in hours per week spent on housework tasks by married mothers and fathers in the United States, 1965–2000.* CENGAGE LEARNING, GALE.

Closely connected to the debate about the combined burden of paid and unpaid work for women is the issue of the time men spend on housework. In her qualitative study, Arlie Hochschild (1989) framed her findings as reflecting a "stalled revolution" in which men's behavior with regard to unpaid labor had not changed nearly as much as had women's involvement in paid employment. Results from time-diary data suggest, however, that husbands in the United States have increased both the absolute amount of time they spend on housework as well as the amount they spend relative to their spouses. The time married fathers spent preparing meals more than tripled between 1965 and 2000 (from 36 to 126 minutes per week), and their time spent on housecleaning increased by a factor of six (from 18 to 108 minutes per week) (Bianchi et al., 2006). Gershuny, Michael Godwin, and Sally Jones (1994) argue that family behavior can be characterized as reflecting a process of "lagged adaptation" in which men's domestic behaviors are slowly coming in line with contemporary patterns of paid work among women. Nonetheless, with an average of 19.4 hours per week, married mothers now spend just over twice as much time on housework per week as do married fathers (Bianchi et al., 2006).

Children's responsibility for housework declined as education replaced family-based production as the principal use of time during childhood and adolescence. Data on children's housework are scarce, but a study by Bianchi and Robinson in 1997 estimated that children spend an average of 22 minutes per day on housework. Time spent on housework is greater among older children, among girls, and among children from larger families. One study by David A. Demo and Alan C. Acock published in 1993 reports that children from single-parent families perform more housework than children living with two parents. In support of the life course concept of "linked lives," there is evidence that children's observations of how their parents divide household labor influence their own division of housework in adulthood.

**Housework and Life Transitions** Participation in housework is closely linked with central transitions in the life course. The transition to marriage is associated with increases in the amount of time women spend on housework and decreases in the amount of time men spend on housework. Although some studies report greater housework sharing among cohabiting couples than married couples, this finding is not universally supported. The transition to parenthood increases time spent on housework for both mothers and fathers (Berk, 1985;), but many studies find that a more strongly gendered division of housework emerges when couples become parents. Couples who become parents at older ages appear to divide housework more equally than couples who have children at younger ages (Coltrane & Ishii-Kuntz, 1992). This finding appears to be the result of greater investments in the father

role by men and greater bargaining power among women who delay entry into parenthood.

Changes in women's paid employment are central to explanations of housework allocation, and wives' earnings have frequently been characterized as a resource with which they can bargain to reduce their responsibility for housework. Several researchers suggest that housework serves as an opportunity for the display of gender in addition to the production of household goods (Berk, 1985; Brines 1994). This line of reasoning holds that women who earn more than half of a couple's income may attempt to neutralize this gender "deviance" by performing a larger share of housework, and their husbands may cut back on housework in a similar effort. Recent work by Sanjiv Gupta (2007) casts doubt on this argument by demonstrating that housework performance is best explained by women's absolute earnings, rather than their earnings relative to their spouses'. In addition to women's earnings, several studies have shown that women's employment histories are positively related to their male partners' participation in housework. Research has also demonstrated that causality may move in the other direction, with responsibility for housework decreasing wages (Noonan, 2001). Retirement is another life course transition with implications for housework, and most research suggests that the division of labor remains highly gendered even after both spouses have retired.

A substantial body of research has documented the consequences for individuals of performing housework. For instance, Michelle L. Frisco and Kristi Williams (2003) showed that perceptions of inequity in housework are associated with a higher risk of divorce among women. Housework performance has also been linked to poor mental health, and cross-national studies have recently expanded the understanding of the cultural context of housework (Hook 2006). This research demonstrates how country-level characteristics such as measures of gender empowerment, women's employment, and welfare state policies directly influence the division of labor between spouses and also how they moderate the influence of individual-level characteristics on patterns of housework allocation.

Studies of housework have made important contributions to our understanding of power and exchange in couples' and individuals' time use. Work done at the turn of the 21st century points to the study of the mental, emotional, and even spiritual dimensions of housework. In addition, scholars are paying increasing attention to issues such as paid help for housework, the growing prevalence of shift work, and the emergence of global migration as a significant factor in housework allocation.

Studies of housework continue to document substantial changes in individuals' performance of housework and their perceptions of appropriate patterns of housework for women and men. As such, research on housework will continue to provide important insights into gender and class dynamics across the life course for the foreseeable future.

**SEE ALSO** Volume 2: *Cohabitation; Dual Career Couples; Gender in the Workplace; Time Use, Adulthood; Work-Family Conflict.*

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**Mick Cunningham**

# HUMAN CAPITAL

**SEE** Volume 1: *Human Capital.*

# I

## IMMIGRATION, ADULTHOOD

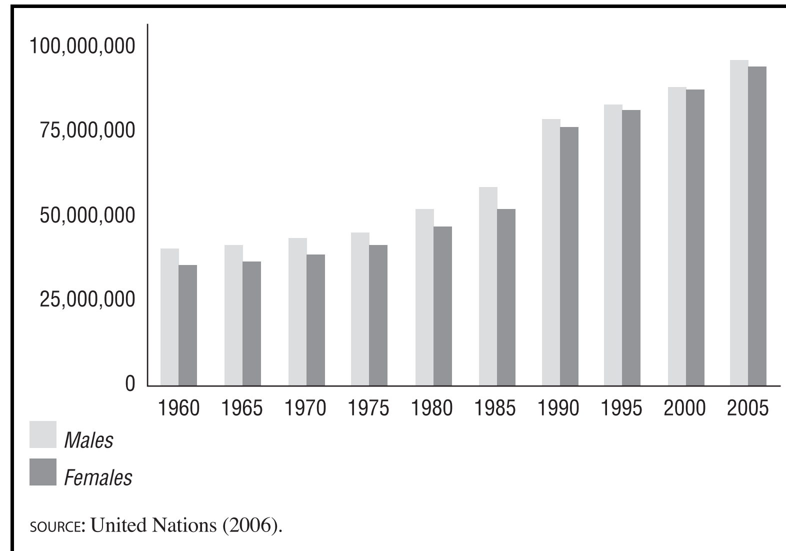
Entering the 21st century, the world is becoming increasingly mobile. People frequently cross international borders on daylong excursions or on longer trips as tourists. A few people, who may lack a fixed place of residence and are often referred to as nomads, move across borders in well-established patterns of territorial mobility. Others cross borders, sometimes returning on a daily basis or after a period of time stretching over years, to work or to study abroad. Others cross borders to seek asylum, to exercise their right to establish residence in the receiving country, or to join relatives. All countries of the world are experiencing the movement of people across their borders and available evidence suggests that the phenomenon has been increasing in volume, possibly because of the growing ease of long-range travel.

The complexity of movements across borders and the consequent difficulties in describing and understanding migration flows, monitoring changes over time, and providing governments with a solid basis for formulating policy has led the United Nations to draft several sets of recommendations about the measurement and description of international migration. The United Nations (2006) has recommended that an "international migrant" be defined as "any person who changes his or her country of usual residence" (p. 17). Unlike previous recommended definitions, it does not include a specific time frame. Instead, the United Nations recommends that migrants be classified as *long-term* if they are in the country of destination for at least 1 year and *short-term* migrants if they are in the country of destination between 3 and 12 months.

Much of the data on international migration are gathered at the time migrants enter their destination country via entry and exit permits or visas; by the processing of requests for asylum (thus ignoring what happened before or happens after the crossing of the border); or through population registers, issuance of residence permits, cross-sectional surveys, and censuses of migrants after they arrive in their country of destination (thus including only those who remained there). Unfortunately, these data constraints mean that much of the knowledge about international migrants remains static, ignores how decisions to migrate depend on or vary by life course stage, and ignores how the consequences of migration for the migrants, their families, and the countries involved vary by life course stage. In addition, shifts in the volume and character of international migration and new phenomena, such as remittances, new destinations, and transnational linkages, mean that much of the story is still unfolding.

### DEMOGRAPHY OF INTERNATIONAL MIGRATION: TRENDS, GENDER, AND AGE

After compiling the data from national censuses and surveys, the United Nations estimates that there were about 75 million migrants in the world in 1960. By 2005 the number had increased to 190.5 million (see Figure 1). In 1960 about 42% of all migrants were found in the more developed regions of the world. Since then the percentage has been steadily growing; by 2005, 60% of all migrants were living in the more developed regions of the world (United Nations, 2006). The major receiving regions in 2005 were Europe with more than 64 million migrants, Asia with more than 53 million migrants, and North America with 44.5 million migrants. The top three receiving countries in 2005 were the United




SOURCE: United Nations (2006).

***Figure 1.*** *Estimated numbers of male and female international immigrants in the world.* CENGAGE LEARNING, GALE.

States (38.4 million migrants), the Russian Federation (12 million), and Germany (10 million). The three top sending countries were China (35 million), India (20 million), and the Philippines (7 million).

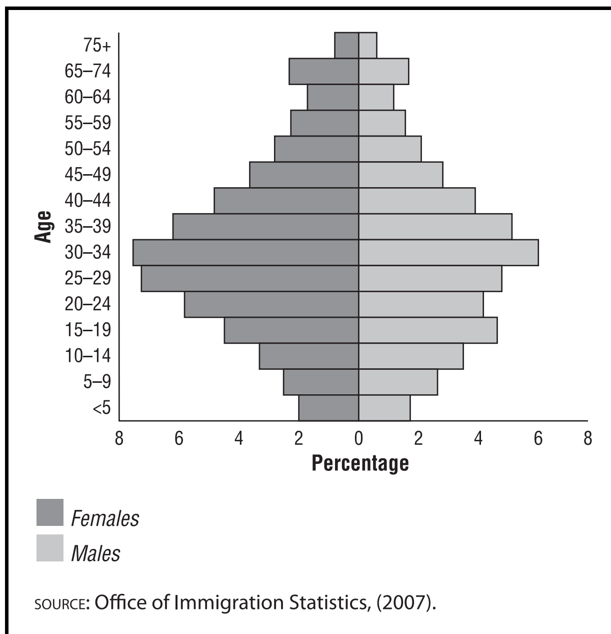
Because of the overwhelming emphasis on economic and occupational incentives and conditions in theories of international migration, typical migrants are often explicitly presumed to be young adult men; yet almost half of the international migrants in 2005, 95 million, were female. In many countries, especially the more developed countries, women constitute the majority of immigrants. In the United States, for example, 57% of the immigrants legally admitted during 2006 were female (see Figure 2). Moreover, although more than half of the newly admitted immigrants were adults in the prime working ages (20–44), about 16% of the newly admitted immigrants were minor children below the age of 15 and about 8% of newly admitted immigrants were over the age of 60 (Office of Immigration Statistics, 2007).

## NATIONAL POLICIES

The volume and character of the migration streams reaching across the world lie, to a large extent, under the control of nation-states. A few countries—such as the People's Republic of China and North Korea—limit the emigration (out-migration) of their citizens. In contrast, some countries have reached agreements that allow free movement across their borders. In 1985 five European countries (Belgium, France, Germany, Luxembourg, and the Netherlands) signed the Schengen Agreement, which allowed free movement of persons and commerce across their borders. By December 2007 the agreement had expanded to include 24 European states and now covers almost all of Europe. (Notably, the United Kingdom and Ireland have only partially implemented the agreement.) The implementation of this agreement means that structure of international migration across almost all European national borders has changed: The movement of people across the shared borders within the Schengen area can no longer be considered international migration. One result is that the focus in European Union countries is now on immigration from countries outside of the Union rather than on what is now being recast as internal migration.

Most countries, however, limit in some way the numbers and characteristics of in-migrants, while not imposing constraints on the emigration of their citizens. Major immigrant-receiving countries, such as Australia, Canada, and the United States, all have immigration policies in place that limit, or attempt to limit, in some way the numbers and types of immigrants allowed into the country. In general, the policies of immigrant-receiving countries focus on numbers (e.g., calculating how many in-migrants the country needs or how many the country can absorb); the potential economic contributions of immigrants; and the social costs (such as the anticipated burdens on the welfare system, health system, and the educational system). However, the details of immigration policies differ greatly from country to country and even within countries across time.

Canada's current immigration policy, for example, uses a point system to rank prospective immigrants with extra points given to those who are younger, well-educated, and know one of the country's official languages. Australia's current system also strongly emphasizes youth, specific occupational skills, and knowledge of English. In the




SOURCE: Office of Immigration Statistics, (2007).

***Figure 2.*** *Percentages of newly admitted immigrants by age and sex (U.S.).* CENGAGE LEARNING, GALE.

United States, the 1965 Hart-Cellar Act lifted the quotas dating from the 1920s for immigrants from selected countries and established family reunification as the major rationale for the admission of immigrants to the country. But after 1990 the United States immigration policy shifted toward admitting skilled and professional labor and immediate family members. (American immigration policy also includes a provision for admitting citizens from countries that have been less likely to send immigrants to the United States.) At a global level, more and more countries are adjusting their immigration policies to overtly court highly skilled young adult immigrants.

The flip side of encouraging highly skilled immigrants is the discouraging of immigrants who lack the designated educational, occupational, or linguistic skills. Individuals who cannot migrate to specific countries under the auspices of the current policy often resort to migration without appropriate documents. Many immigrant-receiving countries, especially the North American and European countries, have been struggling with the growth in the numbers of undocumented or unauthorized migrants. Unauthorized migrants include those who enter the country without receiving the appropriate visa or official permission under the country's immigration policy and those who enter the country with authorization to stay for a limited time, perhaps as a tourist or student, and then overstay. Estimates in 2006 suggest that about 11 million of 30 million foreign-born people who entered the United States after 1980 are unauthorized migrants (Hoefer, Rytina, & Campbell, 2007) and that at least 5 million of the 56 million migrants in Europe crossed international borders without authorization (Global Commission on International Migration, 2005).

## THEORIES OF INTERNATIONAL MIGRATION

The millions of migrants in the world, who comprise about 3% of the world's population, are engaged in large and patterned flows. Numerous theories of international migration—varying across academic discipline, level of analysis, and data sources—attempt to explain these flows. Economists, for example, focus on wage rates and labor market conditions and thus view migrants, especially young adult males, as prospective workers. Political scientists focus on the role of the state and thus consider how policy shapes the attributes of the incoming migrants. Sociologists focus on the assimilation and integration of immigrants in the country of destination and thus investigate how immigrant children and the children of immigrants fare in the receiving societies. More recently, social scientists are considering global forces shaping international migration.

Neoclassical macroeconomic theory is the oldest and still best-known approach to understanding why some people move from one country to another. The basic assumption is that international migration is caused by national differences in the supply of and demand for labor. Individuals change labor markets if the prevailing wages and other employment conditions are better in the destination country. Neoclassical microeconomic theory presumes that rational actors migrate because they expect an increase in some positive reward, usually higher wages, after taking into account the costs of migration, which include the difficulties of adjusting to a new labor market and a new social environment. The new economics of migration focuses on households rather than on individual workers. Here households are viewed as managing their economic well-being by diversifying the allocation of household resources (and thus minimizing risk) by, for example, sending one or more household members to work in a different economy.

Dual labor market theory, by contrast, argues that international migration is caused by a permanent demand for immigrant labor that is inherent to the economic structure of the more developed nations. The demand for immigrant labor is fed by the need of employers, who have capital at their disposal, to hire workers only when labor is needed to satisfy demand. Immigrants satisfy capitalists' need for temporary labor because immigrants, especially less educated immigrants, are more apt to be satisfied with low-level and unstable jobs than native-born workers.

Doug Massey (2004), a sociologist, offered the theory of cumulative causation to explain why international

migrations continue after the initial conditions triggering a migration flow disappear. The basic argument is that the social networks and social institutions that emerge along with a migration stream serve to perpetuate the flow. Scholars such as Alejandro Portes (1999) have argued that contemporary international migration is too complex to be explained by one overarching grand theory. He suggests that scholars consider at least four important dimensions: the origins of immigration, the directionality and continuity of migrant flows, the use of immigrant labor in destination countries, and the integration of immigrants in the receiving societies.

The available theoretical frameworks are limited in many respects. Few consider how gender, age, and life cycle considerations play out in decisions and opportunities to migrate; which migrants countries prefer to encourage under their policies; and how immigrants fare in their country of destination. In particular, there are only piecemeal explanations seeking to understand the migration of people who migrate before or after young adulthood. Young migrant children, for example, are almost always assumed to have migrated with one or both of their parents. Yet this assumption omits the role of international adoption in the migration of orphans, the migration of children who join other family members, and the migration of children who are sent to other countries by their guardians for educational or other reasons. The presumption that minor children always accompany their migrant parents also cloaks the corollary assumption that migrant parents always bring their minor children with them to their country of destination, which is almost certainly not the case. Meanwhile, the preponderance of young adults among recent migrants means that little attention has been paid to the smaller but growing numbers of migrants who move later in adulthood.

Similarly, women are often assumed to migrate with their husbands or other family members but many, in fact, migrate independently of family members. Although many women migrate for economic reasons, some women (and a few men) embark upon cross-national relationships and migrate to join their partners or spouses. This phenomenon, which is fed by countries' worldwide military operations, the growth of multinational businesses, the consequent traveling of employees across borders, and the increasing presence of Internet matchmaking organizations fostering cross-national relationships, appears to be responsible for a growing number of international migrants.

## OUTCOMES OF MIGRATION

The effects of international migration are complex, pervasive, and occur at several different levels of analysis. International migration affects both the sending and receiving nations. The lives of migrants are affected by which country they were born in, the timing and reason for migration, and by their country of destination. In addition, migration streams between countries forge social and economic linkages that affect people in both societies.

Between 1990 and 2000, for example, migration accounted for more than half (56%) of the population growth in the developed world, and an astonishing 89% of the population growth in Europe. Many of the major immigrant-receiving countries such as the United States and several countries in the European Union, which are experiencing increases in racial, cultural, and religious diversity because of high levels of immigration, are engaged in heated political discussions about the integration of migrants. In a tightly related phenomenon, because many migrants move in young adulthood, a life stage marked by childbearing and childrearing, migrants in low-fertility regions such as the European Union and North American countries are the parents of a disproportionate number of children. Immigrants in the United States, for example, constitute about 12% of the general American population, but are the parents of about 23% of the nation's children. Many immigrant-receiving countries are thus also engaged in discussions about the added educational needs of the children of immigrant parents—for example, bilingual programs.

Increasingly, international migration is responsible for strong financial linkages between countries. This is clearly seen in the significant growth of remittances from migrants (especially those in the more developed countries) to families in their countries of origin. In 2006 the World Bank estimated that remittances reached a worldwide peak of $258 billion U.S. dollars, most of which was sent to developing countries. These flows of money are widely recognized as among the most stable external sources of money for developing countries and, in the case of countries such as Mexico, the Philippines, and most recently India, constitute a significant fraction of the country's gross domestic product (Chishti, 2007). It is unclear to what extent the levels of remittances are driven by the sheer numbers of international migrants or whether remittances submitted by migrants increase as they age in the destination society (and presumably earn more) or drop as migrants' ties to the sending country fade over time.

Social scientists, especially economists and sociologists, are concerned about the welfare of individual migrants after they arrive in the new country. Economists often track trajectories of earnings over the remainder of the migrants' life cycle in the new country; sociologists have done the same for occupational careers. This research often shows that after controlling for educational attainment and other forms of human capital, migrants' labor force careers are disrupted shortly after migration but often recover as they adapt to the new society.

However, most of this work has concentrated on male migrants who arrive in early adulthood.

Sociologists have also considered how those who migrate in childhood fare in the new society. Very little research has compared how the timing of migration in a migrant's life course, whether in childhood, early adulthood, middle adulthood, or late adulthood, differentially affects a migrant's life trajectory and well-being in the country of destination. But some processes of acculturation may be much more difficult for people who migrate later in life to a new country than for those who migrate earlier in life. The *critical period hypothesis* in second language learning, for example, suggests that age at migration is a potentially important predictor of how well a migrants eventually learn their host society's language and thus of how well they then fare in the labor market (Bleakley & Chin, 2004).

**SEE ALSO** Volume 1: *Assimilation; Immigration, Childhood and Adolescence;* Volume 2: *Residential Mobility, Adulthood.*

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*Gillian Stevens*

# INCARCERATION, ADULTHOOD

This entry discusses both incarceration and imprisonment. Individuals are considered imprisoned when they have been convicted of a crime and sentenced to more than 1 year. Although some imprisoned individuals are held in local jails, most are transferred to state or federal prisons to serve their sentences. The median sentence for state prisoners, who comprise more than 85% of the American prison population, is 36 months, and the median time served is 17 months. Although an individual must have been sentenced to more than a year to become a prisoner, all an individual must do to be considered incarcerated is be held in a jail—even just for 1 day. The term *incarceration* covers everything from people serving life sentences for murder to people who have been jailed overnight because of disorderly conduct. The term *incarceration* therefore covers a broader range of confinement than does the term *imprisonment*.

## THE ERA OF MASS IMPRISONMENT

For the first three-quarters of the twentieth century, the American imprisonment rate hovered around 100 persons per 100,000. Over this period, American imprisonment was noteworthy mainly for its stability; in 1973 the imprisonment rate appeared so immune to social change that researchers doubted it would deviate significantly in the near future (Blumstein & Cohen, 1973). Even the coming and going of two great wars—World War I (1914–1918) and World War II (1939–1945)—had little effect on the imprisonment rate. Starting in the mid-1970s, however, American imprisonment rapidly increased. As of 2008, the imprisonment rate in the United States was more than 500 per 100,000. America's rate of incarceration is closer to those of South Africa, Malta, and the former Soviet Union than to Great Britain, Canada, or other comparable democracies. A high rate of imprisonment has become a distinctive feature of American society since the mid-1980s.

Although researchers debate the causes of the dramatic rise in American imprisonment, there is considerable agreement that the prison boom had political and economic antecedents. Following the presidential campaign of Barry Goldwater (1909–1998) in 1964, crime became a national political issue as it never before had been. For the first time,

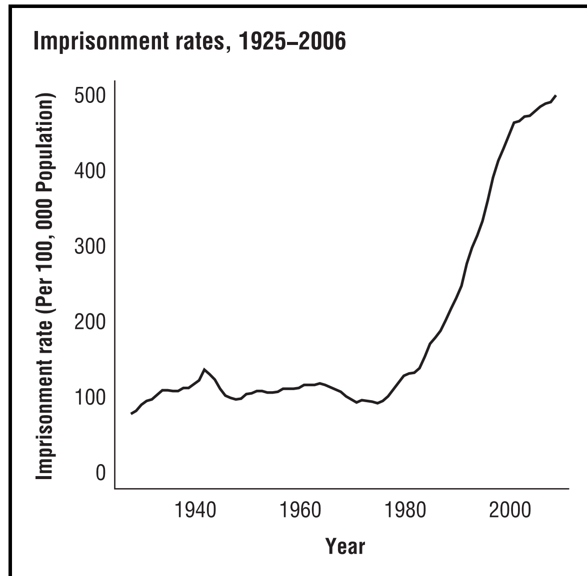


*Figure 1.* *U.S. Imprisonment rates, 1925–2006.* CENGAGE LEARNING, GALE.

politicians on a grand scale began solidifying public support by sponsoring punitive legislation that was often as predictive as it was reflective of public opinion (Beckett, 1999). The national manufacturing decline and the flight of jobs and people from poor urban neighborhoods to predominantly White suburbs also altered the landscape of opportunities available to the nation's worst off. Crime rates during this period rose, but the connection between rising crime and the use of incarceration is not overwhelmingly strong. The drug trade—and the War on Drugs beginning in the 1980s—hold a particularly important place in the story. Increasing rates of incarceration for drug-related crime explain 45% of the increase in the state prison population (Western, 2006).

The causes of mass imprisonment have received substantial research attention since the 1990s, the consequences of incarceration have also been examined. Rather than focusing solely on the effects of incarceration on crime, this research considers a wider variety of impacts of incarceration on individuals, their families, and society more broadly.

## RISKS OF INCARCERATION

The risk of being incarcerated is unequally distributed in America, as elsewhere. The risk of entering prison or jail is highest during the period between a person's late teens and early 30s; before and after this age span, the risk is relatively low (Pettit & Western, 2004). Men are much more likely to be incarcerated than women, although the risk of imprisonment has grown faster for women since the 1980s (Bonczar, 2003). The lion's share of the growth in female imprisonment is attributable to changes in convictions for drug-related offenses. Individuals with low levels of education—and especially individuals who have not finished high school—are more likely to enter jail or prison than individuals with higher levels of education. Racial inequality in the risk of imprisonment is also substantial: Black men born between 1965 and 1969 were around seven times more likely to have been to prison by 1999 than comparable White men (Pettit & Western 2004, pp. 161–162). Latinos are also at higher risk of imprisonment than Whites, but their risk is much lower than that of comparable Blacks (Bonczar, 2003). Black men who did not finish high school have a 60 percent chance of going to prison in their lifetime (Pettit & Western, 2004, p. 161).

The mass imprisonment of Black men has significant life-course implications. As Table 1 indicates, Black men are more likely to be imprisoned at some point in their lives than they are to earn a college degree or enter military service. The same cannot be said for White men, only about 3% of whom will ever be sent to prison. For Black men with little education, marriage is not even twice as common as imprisonment. White men, by contrast, are 12 times more likely to get married than go to prison.

Large racial and class inequalities in the risk of imprisonment suggest that, even prior to incarceration, the life chances of prisoners are more limited than those of the average individual. Inmate surveys bear this out: Prisoners are more likely than the average citizen to have been abused as children, to suffer some form of mental illness, to have been homeless, and to be addicted to drugs or alcohol (Mumola, 2000). Coupled with histories of criminal activity, unemployment, and residence in poor neighborhoods, most prisoners began life at a significant disadvantage to the general population.

## CONSEQUENCES OF INCARCERATION

Research suggests, however, that having been incarcerated may further impede the life chances of formerly incarcerated individuals. Studies conducted since 2000 point to four areas in which incarceration may have consequences for the lives of former prisoners: (a) the labor market, (b) family life, (c) health, and (d) civic participation. This entry does not discuss the effect of imprisonment on crime—a topic that is the subject of much debate—in any detail. One study estimates that the growth in imprisonment rates explains only about 10% of the decline in serious crime at the end of the 1990s, but estimates range from no effect to 40% (Western, 2006).

Of all the consequences of incarceration, its economic effects have probably received the most scholarly attention. Research in this area has focused on three labor market outcomes: (a) getting a job, (b) earnings, and (c)

| Life Event | White Men (%) | Black Men (%) |
|---|---|---|
| All Men | | |
| Prison Incarceration | 3.2 | 22.4 |
| Bachelor's Degree | 31.6 | 12.5 |
| Military Service | 14.0 | 17.4 |
| Marriage | 72.5 | 59.3 |
| Noncollege Men | | |
| Prison Incarceration | 6.0 | 31.9 |
| High School Diploma/GED | 73.5 | 64.4 |
| Military Service | 13.0 | 13.7 |
| Marriage | 72.8 | 55.9 |

SOURCE: Pettit and Western 2004:164.

***Table 1.*** *Percentage of non–Hispanic Black and White men, born 1965–1969, experiencing life events and surviving to 1999.* CENGAGE LEARNING, GALE.

wage growth. The most methodologically rigorous study to date of the effects of incarceration on the probability of getting a job showed that having a criminal record drastically reduced the likelihood of receiving a positive response from an employer seeking to fill an entry-level position (Pager, 2003). The study also showed that Black men with criminal records did much worse than White men. White men with criminal records received a positive response 17% of the time; comparable Black men received a positive response 5% of the time (Pager 2003, p. 958). Research on earnings draws similar conclusions, showing that having ever been incarcerated diminishes earnings by as much as 40% (Western, 2006). Other studies suggest that because time out of the labor force may diminish the probability of getting a career job, and thus having substantial wage growth, incarceration may increase economic inequality (Western, 2002). Yet these findings are not without dispute; research using administrative data shows that an additional year of incarceration does not diminish earnings (Kling, 2006).

For individuals attached to families, the experience of imprisonment also appears to weaken family ties. Men who go to jail or prison experience much higher risks of divorce and separation than otherwise comparable men; they also experience much lower rates of marriage than other men when they are incarcerated (Lopoo & Western, 2005). Families of the incarcerated often shoulder burdens of visitation, diminished household earnings, and stigma; mothers tend to suffer psychological distress as a consequence of having their adult sons incarcerated. One study suggests that romantic partners have higher levels of stress and depression because of the incarceration of a loved one (Braman, 2004). Other research, however, reports that the removal of a violent, drug-addicted man from a household may provide temporary respite for women (Comfort, 2008). Substantial differences in interpretations of the effects of incarceration on romantic partners illustrate the need for more research on the collateral consequences of incarceration.

Imprisonment, however, affects more than the life course of incarcerated adults and their families. High levels of imprisonment also have consequences for children. As imprisonment has become common for adults, so also has parental imprisonment become common for children. Christopher Wildeman (in press) estimates that one in four Black children born in 1990 had a parent imprisoned by their 14th birthday; for Black children of high school dropouts, parental imprisonment was modal. These risks are about twice the risk of those for children born 12 years earlier—and drastically higher than the risk for comparable White children. One consequence of high levels of imprisonment—especially female imprisonment—is an elevated risk of children being placed in foster care. Changes in the female incarceration rate account for 30% of the drastic increase in foster-care caseloads between 1985 and 2000 (Swann & Sylvester, 2006). Although other consequences of parental incarceration for children are uncertain, there are reasons to suspect that parental incarceration further disadvantages children. If so, mass imprisonment would contribute not only to social inequality among adults but also to that among children.

Incarceration may additionally worsen the health of former prisoners. Ex-offenders have higher death rates than those who have never been incarcerated after adjusting for age, sex, and race (Binswanger et al., 2007), although it is unclear whether this relationship is causal or spurious. In the latter case, the association may reflect other factors associated with both higher risk of death and incarceration, such as drug abuse. Even if incarceration does not increase mortality risk, research shows that incarceration increases the risk of certain acute health conditions (Massoglia, 2008)—especially those related to stress—and has contributed to racial inequality in HIV and AIDS infection rates for both men and women (Johnson & Raphael, in press). To the degree that mass imprisonment may harm the health of prisoners—and, potentially, their families and children—it is not only a criminal justice concern but also a public health concern.

Finally, incarceration poses formidable legal barriers to political participation, the retention of parental rights, and the receipt of welfare, public housing, and financial aid (Travis, 2002). In all but two states, incarcerated individuals are not allowed to vote, and ex-felons are not allowed to vote in many states. The 1997 Adoption and Safe Families Act speeds the termination of parental rights for children who have been in foster care for 15 of the last 22 months—a duration far shorter than the median prison sentence. An often-overlooked provision of welfare reform permanently prohibits individuals with

drug-related felony convictions from receiving federal assistance and food stamps. Statutes enacted in the 1990s give public housing agencies the authority to deny housing to individuals with a wide array of criminal convictions. Also, the Higher Education Act of 1998 renders any individual convicted of a drug-related offense ineligible for student loans. Together, these legal barriers present formidable challenges to individuals seeking to return safely from prison—particularly given their diminished pre-incarceration resources (Travis, 2002).

## DOES INCARCERATION REALLY DIMINISH LIFE CHANCES?

Although research on the effects of incarceration on the life chances of individuals points to consistent, negative effects, it is also possible that the poorer life chances of the ever-incarcerated are due to something other than incarceration. The logic for this argument is simple: Because researchers know that individuals likely to go to prison already suffer from diminished life chances, how can they be sure that differences between formerly incarcerated individuals and other individuals are due to incarceration and not something else, such as living in poverty or partaking in crime? Most studies in this area use observational data and therefore have difficulty isolating causal relationships between incarceration and life chances. In order to increase confidence in the foregoing conclusions about the consequences of incarceration, more studies should use experimental or quasi-experimental research designs. Although this type of research is typically more difficult, expensive, and time-consuming to conduct than other types of research, the potential rewards are greater because these experimental studies have less trouble dealing with many of the biases that hinder studies based on observational data.

## FURTHER RESEARCH

There are many important areas for future research in the study of incarceration, but two merit special attention because of their potential policy implications. First, researchers should consider situations in which incarceration may *improve* the life chances of incarcerated individuals and those around them. Current research tends to consider incarceration as having only negative effects on the life course of individuals and their loved ones—indeed, this entry suggests just that—but one recent study casts doubt on the claim that incarceration only diminishes life chances (Comfort, 2008). This study is quick to note, of course, that many of the benefits of incarceration exist solely because prisons are one of the only places in which basic social services are readily available to the poor. In order to have a better idea of what the consequences of incarceration are, however, researchers should attempt to determine with greater precision when incarceration harms, helps, and has no effect on individuals.

Second, more research should evaluate programs to help formerly incarcerated individuals successfully return to civic life after leaving prisons and jails. To find out what works, more research should be conducted on which programs—both during and after incarceration—help diminish the probability of recidivism. Research should also consider early intervention programs aimed at decreasing an individual's risk of incarceration. Although the evaluation of programs should not be the sole focus of policy interventions, researchers of the penal state should nonetheless spend more of their time and resources considering how to keep individuals away from crime and out of prison.

**SEE ALSO** Volume 1: *Juvenile Justice System;* Volume 2: *Crime, Criminal Activity in Adulthood; Employment, Adulthood; Unemployment.*

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# INCOME INEQUALITY

Income inequality can be defined as the amount of variation in the value of goods and services received by individuals in a defined population at a given time. That is, income inequality refers to how income is distributed among members of a population at a point in time. For instance, in the United States, according to Census Bureau estimates for 2006, the poorest 20% of households (those earning $19,178 annually or less) earn just 3.4% of all income earned by households in the United States, whereas the richest 20% of households (those earning over $91,705 annually) earn 50.5% of all income earned by households in the United States. The significance of income inequality for the life course and life course research is difficult to overstate, because life course processes are related to both the causes and the consequences of income inequality. For instance, the degree of variation in income within a society establishes a structure of economic opportunity that constrains economic achievement, and the pursuit of economic well-being itself helps to establish the level of income inequality observed at a particular historical moment. Broadly, the amount of income inequality makes up a central part of an individual's sociohistorical context as that individual navigates the life course.

## MEASUREMENT

Researchers have developed a wide array of methods to measure income inequality. One of the most popular is the Gini coefficient, which quantifies the difference between an observed income distribution and a perfectly equal income distribution. The Gini coefficient ranges from a minimum of 0 (or perfect equality, where all income-receiving units receive an equal share of the income produced in a society) to a maximum of 1 (or perfect inequality, where one income-receiving unit receives all the income produced in a society).

The first step in calculating the Gini coefficient and other summary measures of income inequality is thus to define the income-receiving unit. Because incomes are typically shared within households, empirical researchers often designate households as the unit of analysis. The next step is to define income. For instance, one commonly used income measure is *disposable income*, or the sum of all wage and salary income and government income transfers, less direct tax contributions, that is available for spending or saving. Thus disposable income includes income from many sources, not just income from employment. This highlights the important distinction between *income inequality* and *wage inequality*. Income inequality, a broader concept, in addition to wages and salaries also includes money from self-employment; property income; pension, sickness, disability, and unemployment benefits; child support transfers; and a wide range of other government benefits. Because income inequality incorporates information on government taxes and transfers, it is also referred to as *post-fisc inequality*, in contrast to *pre-fisc inequality*, or inequality generated only by the market.

Once the income-receiving unit and income are clearly defined, the Gini coefficient, and other measures of income inequality, can be calculated. The Gini coefficient itself is based on the Lorenz curve, which plots the cumulative share of total income (on the y-axis) against ranked income-receiving units (on the x-axis). For instance, in a society with perfect income equality, the Lorenz curve would be shaped like a straight line tilted at a 45-degree angle, as the lowest 20% of households shared 20% of society's income; the lowest 50% shared 50%; the top 20% shared 20%; and so on. Again, in this perfectly equal society, the Gini coefficient would be 0. By contrast, in the United States, where the bottom 20% of households garner 3.4% of total U.S. income and the top 20% of households garner 50.5% of total U.S. income, the Gini coefficient equals 0.464 (based on Census Bureau estimates for 2006 data).

Other popular summary measures of income inequality include (a) the variance of logged incomes; (b) the coefficient of variation; (c) the Theil index; (d) the Atkinson coefficient; and (e) the relative mean deviation. One popular measure that is especially easy to interpret is the percentile ratio, or the ratio of income received by a household at a percentile rank high in the income distribution to the income of a household at a lower rank. One's location in the income distribution thus refers to how their income ranks relative to others in the United States. For example, a household in the 80th percentile of income distribution is a household whose income is higher than 80% of households in the United States.

In the United States, the ratio of income earned by a household at the 80th percentile of the income distribution

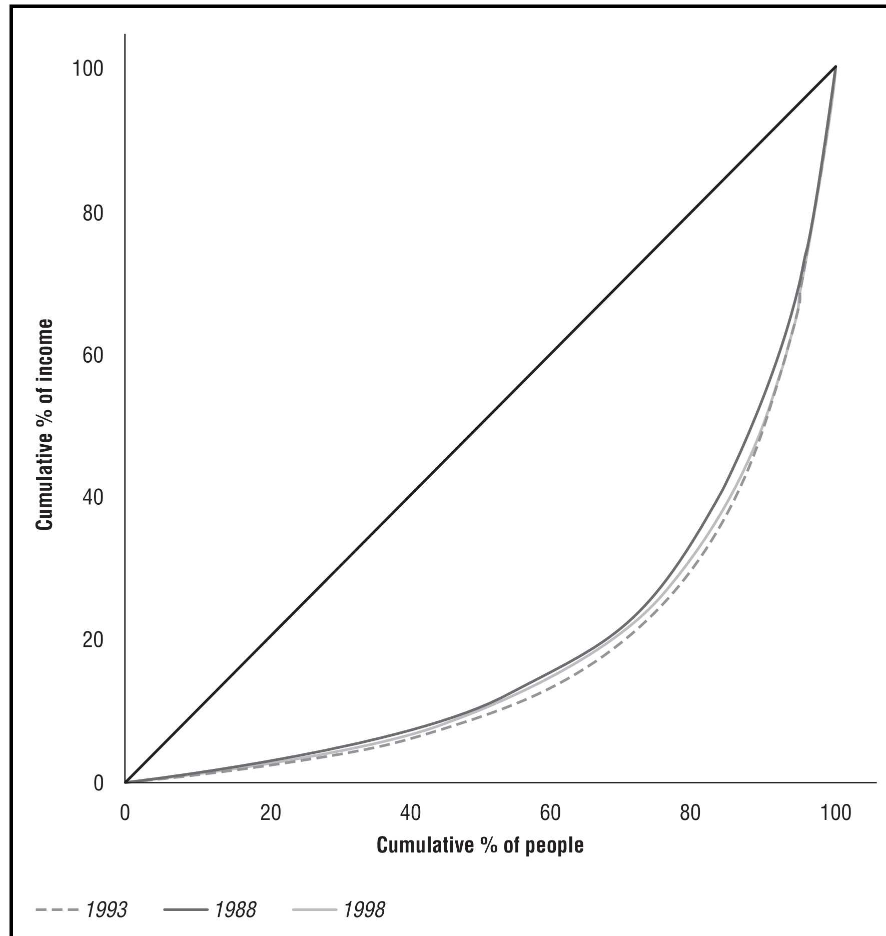


***Figure 1.*** *Global Lorenz curve (world individuals).* CENGAGE LEARNING, GALE.

to income earned by a household at the 20th percentile (the 80-20 percentile ratio) was 2.996 in 2000, according to the Luxembourg Income Study (LIS). By contrast, the 80-20 ratio in Canada was 2.524, and in Sweden it was 2.012. The 90–50 percentile ratio—the ratio of the 90th percentile household income to the median household income—was 2.104 in the United States, 1.933 in Canada, and 1.684 in Sweden.

## TRENDS

There is a consensus in research literature that income inequality within advanced industrial societies such as the United States has grown since the 1970s. For instance, again according to the LIS, the Gini coefficient for the United States has grown from 0.301 in 1979 to 0.372 in 2004, which is a very large increase as income inequality generally does not exhibit strong trends. (The difference between the LIS estimate and the Census Bureau estimate reflects differences in how the indices are calculated; LIS data are calculated for cross-national comparability.) Even in egalitarian Sweden, though, the Gini coefficient grew from 0.197 in 1981 to 0.252 by 2000. However, whereas many accept that income inequality has increased in societies such as the United States, there is more debate over (a) the specific timing of the increase; (b) the extent of the increase; (c) the causes of the increase; and (d) the consequences of the increase (Neckerman & Torche, 2007). Arthur Alderson et al. (2005) used LIS data on 16 advanced industrial countries to clarify how inequality has changed. They show that the largest increases in income inequality have been driven more by the rich getting richer (upper polarization) than by the poor getting poorer.

There is also a consensus in this literature that income inequality varies substantially across countries, with the highest levels generally observed in the developing countries of Latin America and sub-Saharan Africa, and the lowest levels generally observed in the advanced industrial countries of Scandinavia and western Europe. Anglo countries such as the United States, the United Kingdom, Canada, and Australia currently exhibit levels of income inequality that are significantly higher than

those in western Europe. The trends also differ, with income inequality growing more rapidly in the United States than in western Europe. Of course, whether data are comparable across nations is a key concern when comparing levels of income inequality, but great strides have been made in this regard by data collection and dissemination efforts such as the LIS and the Pitt Inequality Project, which collect comparable data from many nations and make them available to researchers.

If there is general agreement that income inequality has increased in many advanced industrial societies, and has increased especially strongly in the United States, there is much less agreement on how total world income inequality is evolving. (See Kathryn Neckerman's and Florencia Torche's "Inequality: Causes and Consequences" [2007] for an overview addressing this matter and references to key works on the subject.) Total world income inequality is the broadest measure of income inequality, because it is composed of between-country differences in national economic development, and within-country income inequality among individuals. In one influential line of research, sociologist Glenn Firebaugh (2003) argues for a "new geography of global income inequality" based on evidence that total world income inequality is on the decline, because rising income inequality within countries is vastly outweighed by decreasing economic inequality between countries. In direct contrast, economist Branko Milanovic argues that global inequality rose sharply from 1988 to 1993, then declined modestly from 1993 to 1998, based on new evidence from household survey data. This debate is marked by a number of measurement controversies and differences of interpretation, creating a significant opportunity for further research. Moreover, few studies have examined the difference this possible change in the global social context makes for the lives of individuals as they move through the life course.

## CAUSES

The relationship between economic development and income inequality has long been a puzzle. In the 1950s, economist Simon Kuznets (1901–1985) conjectured that income inequality has an inverted U-shaped relationship to economic development, rising in the early stages of industrialization and falling at later stages, as people move from the agricultural sector, where wages are lower, to the industrial sector, where wages are higher. This sector dualism causes income inequality to increase at first, purely as a function of the changing composition of the labor force by economic sector. Two other changes associated with economic development can also help to account for the Kuznets curve: the expansion of mass schooling, which decreases the wages of the highly educated by creating a larger pool of highly educated labor, and the demographic transition from a high-fertility, high-mortality regime to a low-fertility, low-mortality regime, which increases income inequality as population growth expands the labor supply at the low end of the income distribution (Alderson & Nielsen, 2002).

Because wage inequality is clearly a significant proportion of income inequality, researchers also look to other aspects of the labor market beyond sectoral composition, skill composition, and demographic composition to explain cross-national differences and trends in income inequality. For instance, a large body of evidence shows that where labor is better organized, inequality will be reduced. Antilabor corporate restructuring and government policies in the United States in the 1980s are often blamed for part of the increase in income inequality in the United States, and cross-national investigations show that unionization rates are highly correlated with income inequality (Alderson & Nielsen, 2002). On the demand side of the labor market, one controversial explanation of increased income inequality in places such as the United States is skill-biased technological change: The argument is that technological shifts have substantially raised the wages of the most highly educated segment of the labor force, which has raised income inequality by increasing inequality in the upper end of the income distribution.

National governments are also critical to any examination of the causes of income inequality. National economic policies, for instance, produce and reproduce social cleavages, as tight monetary policy restricts inflation and benefits the privileged classes, whereas full employment policy benefits the disadvantaged classes. Social policy also affects income inequality directly through income transfers. Other national policies and institutions also affect income inequality: In the United States, laws restricting labor organization, tax policies, infrastructure programs, the declining real value of the minimum wage, and education policies all affect the level of income inequality, by shaping who has access to education and helping to determine which jobs receive what rewards, among other mechanisms.

In response to explanations that center on forces within nations, world systems theory redirected scholarly attention toward international forces during the 1970s and 1980s. World systems theory argues that income inequality in developing countries is worsened by dependence on foreign capital, as (a) the occupational structure is distorted in an expansion of the working class and an internationally oriented elite, and (b) the nation directs its economic and social policy to the advantage of multinational corporations (Chase-Dunn, 1975). In work on advanced industrial societies, there is also evidence that globalization is associated with the recent increase in income inequality that has been dubbed "the Great U-Turn" (Alderson & Nielsen, 2002). New research also shows that other international forces, including the regional integration in western Europe, are also associated with rising income inequality, over

and above any relationship between inequality and globalization (Beckfield, 2006). This suggests that regional integration, or the construction of regional political economy that has enjoyed a resurgence around the world, itself may be an important new dimension of the social context that influences the life chances of individuals.

## CONSEQUENCES

Whether income inequality has important consequences is an enduring controversy. Neckerman (2004) presents evidence from the Russell Sage Foundation's research program on inequality, focusing on the relationship between growing income inequality in the United States and several other aspects of social inequality, including family and neighborhood life, education and work, health, political participation, public policy, and wealth, while Stephen Morgan, David Grusky, and Gary Fields (2006) review research on the connections between income inequality and social mobility. Although each of these topics is clearly relevant to life course scholarship, the debate over health has been particularly contentious and policy-relevant, and thus warrants a detailed treatment.

Since Richard Wilkinson's pioneering work in the early 1990s, researchers from various disciplines have debated the provocative claim that the level of income inequality in a society is related to the health of its population (Beckfield, 2004; Wilkinson & Pickett, 2006). The theoretical arguments for a negative health effect of income inequality are straightforward. Perhaps most prominently, Wilkinson pursues an approach based on the work of French sociologist Emile Durkheim (1858–1917) that emphasizes social integration. For Wilkinson (1996), income inequality produces social disintegration, which causes unhealthy societies. Disintegration translates into poorer population health as individualism dominates social life and undermines the beneficial health effects of social support. Wilkinson claims that to live in a society characterized by inequality and social disintegration is to "feel depressed, cheated, bitter, desperate, vulnerable, frightened, angry, worried about debts or job and housing insecurity; to feel devalued, useless, helpless, uncared for, hopeless, isolated, anxious and a failure" (1996, p. 215), and that these feelings harm health. This social psychological mechanism may help to account for high correlations between income inequality and measures of population health that are sometimes observed in samples of advanced industrial societies.

Poor health in high-inequality societies has also been explained as a result of societal underinvestment in pro-health physical, human, and cultural capital, including medical services, education, and cultural activities (Lynch & Kaplan, 1997). These claims overlap with Wilkinson's, because they argue that this underinvestment hurts health, in part, because it undermines social cohesion. However, John Lynch and George Kaplan (1997) focus instead on conditions experienced in everyday life and deemphasize the emotional experience of inequality. Some theorists consider relative deprivation the link between income inequality and health. Relative deprivation theorists generally argue that the perception that one has less than others causes psychological stress, which produces ill health. This reasoning suggests that income inequality harms population health because it intensifies this relative deprivation. Some researchers emphasize both social cohesion and relative deprivation as important determinants of health. Controversies surround the finding of a correlation between income inequality and health, with some researchers questioning the generality of the correlation (Beckfield, 2004; Wilkinson & Pickett, 2006).

Research on income inequality is enjoying a renaissance, and there are a number of opportunities for further work in this theory-rich and policy-relevant area. Research that addresses the debates above is clearly needed, as is further work to address two major gaps in the literature: (a) an inadequate understanding of how inequality among groups within national societies relates to the overall level of income inequality, and (b) an inadequate understanding of how international forces affect income inequality among and within national societies. First, although early-21st-century research on inequality within the United States has focused on the roles of gender discrimination (Correll et al., 2007), racial discrimination (Pager, 2003), social networks (Mouw, 2003), and cultural dynamics of child-rearing strategies (Lareau, 2003) in explaining economic outcomes for different groups within the United States, this work is rarely connected to the level and trend in income inequality. Second, the ongoing formation of international economic and political networks raises new questions about how changes in the scale of social action and institutions affect and are affected by patterns of income inequality.

**SEE ALSO** Volume 2: *Economic Restructuring; Educational Attainment; Employment, Adulthood; Globalization; Occupations; Poverty, Adulthood; Saving;* Volume 3: *Wealth.*

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# INDIVIDUATION/ STANDARDIZATION DEBATE

Social scientists have a long-standing interest in the structure of the life course, that is, in the occurrence, timing, and order of social roles over people's life spans and how these patterns are shaped by sociohistorical conditions. Such interests are two-fold. In one respect, variation in whether, when, and how people move into adult social roles has implications for social achievement, social standing, social experience, as well as one's identity, attitudes, and emotions. For example, the often contentious issue of teen parenthood typically reflects concern about the implications of a major life transition occurring at too young of an age, prior to other life transitions (such as finishing school), or in the absence of potentially complementary transitions (such as marriage). Yet in another respect, the variable unfolding of human lives is informative about the societies around them. Different societies foster distinctive pathways through life and thus reveal the presence of cultural norms, scripts, and sociostructural contexts that shape how lives unfold. In this regard, the life course is often examined as a window into the modernization and development of societies.

Although analysis of the life course extends back to the 19th century, the dramatic social changes of the 20th and early 21st centuries set the stage for volumes of research. The central issue at hand was how core changes in the nature of society restructured, perhaps even radically so, the individual life course. The empirical aspect of this work is simple in the sense that researchers are largely interested in how, if at all, the life course differs from that of earlier societies or varies across cultures. Yet, the study of the life course is also complex in that there is little agreement on how such comparisons should be made. Available data are often sparse and not well-suited to comparison, and the technological advances in statistical methodology that would allow for systematic comparison are in their infancy.

Nevertheless, contemporary research has done much to increase understanding of social change and the life course and has led an important debate. On one side, some scholars argue that the life course is increasingly *individualized* as pathways through life are increasingly diverse and unanchored from mainstream social institutions and social locations (Buchmann, 1989). Such an argument challenges long-held views that human lives were *standardized* in the 20th century by the increasing importance of institutions such as formal education, work, and law and the emergence of a world society. A number of other terms are used to describe the sides in this debate, including *institutionalization*, *deinstitutionalization destandardization*, *differentiation*, *dedifferentiation*, and *pluralization*, but their distinction from the ideas of individualization and standardization is more subtle than substantive (Bruckner & Mayer, 2005).

## THEORIES OF STANDARDIZATION AND INDIVIDUALIZATION

In many respects, arguments for the standardization of the life course are a logical extension of broader arguments about the modernization of societies and their implications for personal and social behavior. Martin Kohli (1986), for example, argued that the modern organization of public services and employment opportunities by age creates a more orderly and homogenous life cycle. Laws regarding age at marriage, mandatory participation in education, and employment establish generic starting lines for life transitions. Likewise, the

increased rationality of education and employment in Western nations helped to standardize exits from schooling and thus created similarity in transition ages. Although the evidence to date is thin, there are also grounds to expect that cross-national variation in the life course has diminished with increasing globalization and the emergence of a one-world society linked through shared economies, politics, and social institutions.

The idea of a standardized life course was highly prevalent in the late 1970s and 1980s. This is not surprising given that researchers of the time were typically considering data from the first half of the 20th century and referencing the profound changes in culture and economy that accompanied the post–World War II (1939–1945) era. Specifically, the postwar economic boom led to the regulation of the life course in that males, White males in particular, could finish secondary education (or not), could move into jobs that paid a living wage, and could earn enough to both purchase a house and support a wife and children. Given the emergence of a strong middle class, at least among Whites, it is not surprising that the economic conditions of the era produced a highly regulated life course. Sociologist Dennis Hogan (1978) was among the first to empirically document this *orderly* or *normative* life course whereby people finished school, entered full-time employment, and then proceed to get married and have children, all of which was seen as a rational, almost taken-for-granted response to the economic and cultural conditions of the day.

A view that located the life course in the economic, cultural, and political contexts of society was a logical way of making sense of changes in lives over the 20th century. However, this perspective produced a new set of arguments to accompany the changing conditions of the late 20th century. These arguments emphasized the individualization of the life course and ultimately challenged the earlier standardization thesis. It is difficult to locate exactly where the individualization argument first arose, but it was clearly a reaction to the changing nature of society. Sociologist Michael Shanahan (2000) suggested that an individualization argument had its roots in the decline of family and community, which increasingly freed people from traditional sources of social control and thus allowed them to exercise greater agency in structuring their lives. Likewise, Marlis Buchmann (1989) suggested that the standardized trajectories of the past were "shattered" by structural and cultural change. Among the most significant of these were the increased disconnect between educational attainment and occupational standing, the diminished value of occupational training and expertise, changes in the family involving increased rates of cohabitation and parenthood outside of marriage, and an increase in cultural emphases on emotional well-being through individuality. These forces unanchored the modern life course from regulated and regulating institutions and increased the significance of flexibility, choice, and personality in shaping life paths.

## THE STATE OF THE EVIDENCE: WHAT IS KNOWN AND WHAT SHOULD BE KNOWN

Adjudicating among these different arguments is complicated by the fact that there is no agreed-on standard of evaluation and a variety of data has been brought to bear on the issue. Ideally, one would like longitudinal data that covers a number of historical periods. Such data are rare and in many cases nonexistent. As a result, researchers have marshaled data from a wide variety of sources to speak to the key issues. Based on such data, several conclusions can be drawn and several questions remain.

First, it seems clear that the time line for the transition to adulthood became compressed and that standard transitions increased in prevalence through much of the 20th century. John Modell, Frank Furstenberg, and Theodore Hershberg (1976), for example, showed that the time it took 80% of the population to leave their family of origin (i.e., their parents' home), marry, and establish their own household declined significantly between 1880 and 1970. Consistent with this, other research shows that increasing proportions of the population followed a typical or normative life course pattern through the 19th and 20th centuries (Hogan, 1981).

Second, life courses in the late 20th century did have some seemingly unique features. First, the pursuit of higher education became much more prevalent, and thus education characterized a longer period of the life course for a larger percentage of people. Movement into full-time, career-type work was delayed as people increasingly pursued college educations in the hopes of securing better jobs. Yet the labor market itself was less accommodating, which made job entry an even longer and more tenuous process. One corollary to this was an increased overlap between schooling and work, such that full-time students also spent long hours working for pay. At the same time, the age at which people married for the first time increased, in part due to the changes in education and work. In some cases, this produced a re-nesting effect whereby single men and women returned to their parents' home after graduating from college (Goldscheider & Goldscheider, 1999). Coupled with advances in contraceptive technology, later marriage meant that childbearing also occurred later in the life course, creating a phenomenon that sociologists Claude Fischer and Michael Hout (2006) characterized as people having their "third and fourth child" without having their first and second. In addition, new family arrangements became more common—notably cohabitation and nonmarital childbearing—and divorce rates increased sharply. When all these factors are put together, the lockstep, sequential, and

orderly life course of the past has given way to an increasingly elongated, increasingly disorderly, and increasingly variable and differentiated process.

Although the demographic reality of the contemporary life course is not strongly disputed, the weight of the evidence supports neither a pure standardization nor a pure individualization perspective. To some extent, this may be because adjudicating between theories, both of which may be partially correct and which concern historically contingent processes, is an unrealistic goal. At the same time, future study could greatly increase understanding of how life courses are constructed, how life courses vary across gender, racial, ethnic, and social class subgroups in society, and whether and how life courses have changed over time. For example, relatively few studies have linked the social psychological processes integral to the individualization thesis to the demographic behavior of the individuals. Future research should focus on opening the "black box" of human agency in the construction of the life course. Several studies have been attentive to the variety of life course pathways, both within and across social groups, yet future research should seek to formally model heterogeneity in pathways through the life span. In the latter respect, social demographer Elizabeth Fussell (2005) has pioneered techniques to systematically document variation in the life course over time, techniques that should lead the way for a new generation of scholarship. Accompanying such work should be systematic comparisons of longitudinal data from comparable samples from different historical periods. Although the latter approach may require unique data collections, as well as creative use of existing data, it could greatly enhance understanding of the past, present, and future of the life course.

Ultimately, the debate over standardization and individualization highlights changes in the life course and provides concepts for making sense of broad and multifaceted change. More research is needed to show how, if at all, the life course has changed and whether it has changed in the ways that individualization advocates argue. Still, it is difficult not to recognize the complexity of contemporary life paths and treat them and their consequences as an important area of study. As Frank Furstenberg, Sheela Kennedy, Vonnie McLloyd, Rubén Rumbaut, and Richard Settersten (2006) provocatively suggest, the contemporary life course, whether truly "individualized" or not, is a time when "growing up is harder to do."

**SEE ALSO** Volume 2: *Agency; Careers; Globalization.*

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***Ross Macmillan***

# INFERTILITY

Infertility is defined as the inability to obtain and sustain a pregnancy after 12 months of regular, unprotected intercourse. Fertility problems are estimated to affect between 15% and 20% of couples of reproductive age (Tierney, McPhee, & Papadakis, 1999, p. 913). Infertility generally affects women and men equally, with approximately one-third of fertility problems in couples being attributed to female factors, close to one-third to male factors, and one-third to both male and female factors or remaining unexplained (Tierney et al., 1999, p. 913).

Infertility is fundamentally physiological, although the physiological condition may have social precursors. In males, the most common fertility problems are *oligospermia*, a deficiency in the number of sperm in the seminal fluid, or *azoospermia*, the absence or near absence of sperm. Until the late 20th century, fertility problems in females were primarily caused by endocrine imbalances or anatomical impairments, such as blocked fallopian tubes or endometriosis. However, since the late 20th century an increasing number of men and women have been choosing to delay parenthood well into their thirties and forties—attempting to fulfill their educational and career aspirations prior to becoming parents.

Despite the growing number of women and men having children at later ages, many who delay parenthood find that they cannot achieve a viable pregnancy. Fertility typically begins to decline for women in their 30s due to changes in endocrine functioning and aging eggs. Also, as a woman ages the risk of spontaneous miscarriage and congenital abnormalities increases, further compromising her chances of a successful pregnancy. There is evidence that as a man ages, his fertility declines as well due to diminished quality of the sperm (Tierney et al., 1999). When the male partner is older, his female partner has a greater risk of miscarriage and there is also a greater risk of genetic disorders in the child (Sloter, Nath, Eskenazi, and Wyrobek, 2004). These facts have contributed to an increase in the number of individuals and couples in their thirties and forties who turn to medical technology in their efforts to produce a child.

The advancement of reproductive knowledge and technologies in the 20th and 21st centuries has provided many couples with an explanation of, and treatment for, their infertility. These technologies include the use of fertility drugs, *in vitro* fertilization (IVF), intracytoplasmic sperm injection (ICSI), egg-freezing, the use of donor sperm and/or eggs, surrogacy, and gestational care (Tierney et al., 1999). The American Society for Reproductive Medicine (ASRM) reported that as of 2002 almost 300,000 babies were born in the United States alone as a result of advancements in reproductive technologies (American Society for Reproductive Medicine, 2008). Despite these advances, medical intervention results in a viable pregnancy for only 30% to 60% of couples using such treatments, depending on the cause of their infertility (Tierney et al., 1999). For a significant number of infertile individuals and couples medical treatment fails, so they face the difficult task of coming to terms with permanent biological childlessness.

## THE PSYCHOSOCIAL IMPACT OF INFERTILITY

Most individuals assume they are fertile and have control over if and when they will become parents. Consequently, a diagnosis of infertility is usually met with disbelief. Initially couples may be surprised that they are not getting pregnant, but after several months the idea that they might be infertile seeps into their awareness and they seek medical care. When a diagnosis of infertility is confirmed, couples need to decide whether they want and can afford to pursue fertility treatments, which can cost more than $10,000 per treatment cycle (Garcia, 1998). Because multiple attempts are often required to produce a viable pregnancy, couples must also decide how many treatment cycles they are willing and financially able to undergo and when treatment must be abandoned. They may also face ethically and morally difficult decisions about which treatments they are comfortable pursuing, particularly in the case of third-party options such as donated embryos or surrogacy. In an attempt to make sense of their infertility, many turn inward and wonder what they could have done to cause their infertility.

In most cultures, parenthood is seen as an important benchmark of healthy adult development. Fertility also is associated with femininity and masculinity. Consequently, infertility is a major life crisis for most couples—one that is characterized by multiple losses. Feelings of sadness, grief, anger, inadequacy, and depression are common in response to infertility, according to Judith C. Daniluk (2001b). Caren Jordon & Tracey A. Revenson (1999) indicate this is particularly the case for women, whose bodies bear the primary burden of medical testing and treatments and who tend to be held socially accountable for a couple's infertility. Russell E. Webb and Daniluk (1999) point out that men also struggle with coming to terms with infertility—feeling powerless in being unable to give their partner a child

## WOMEN WAITING TOO LONG TO BECOME MOTHERS

Increasingly, women in developed nations are delaying motherhood to pursue their educational and career goals and attain stability in their finances and relationships. However, concerns have been raised about the higher risks of birth defects, prenatal complications, and premature births for older mothers, leading some to suggest that delaying motherhood is not advantageous to mothers or their children. Early 21st century advances in reproductive technology, which appear to offer solutions to some of the fertility problems associated with age, may offer women a false sense of security, leaving many to face infertility and childlessness in the future. There has also been considerable debate in the media about the motivations of women who elect to become mothers in their 50s and 60s and about the potential health of these mothers who may not be able, or available, to raise these children. As this debate rages, reproductive technologies continue to advance. Such is the current state of the brave new world of reproductive technologies.

and questioning their own masculinity when faced with a diagnosis of male factor infertility.

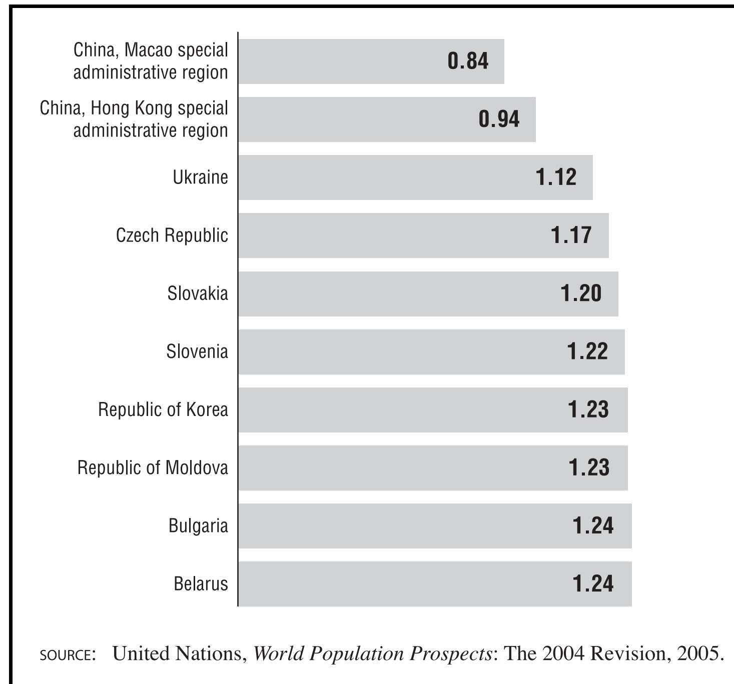
Research, such as that done by Frank M. Andrews, Antonia Abbey, and L. Jill Halman (1991), indicates that men's and women's psychosocial distress increases during what are often very time-consuming fertility treatments. The invasiveness of medical tests, assessments, and treatments is emotionally and physically taxing and frequently places considerable stress on both members of the couple and on their relationship (Daniluk, 2001b; Leiblum, 1997). Couples refer to the "emotional rollercoaster" of infertility treatment—feeling hopeful and optimistic at the start of each menstrual and treatment cycle, followed by overwhelming sadness and even despair when they face another month without becoming pregnant. Infertility also takes a tremendous toll on a couple's sexual relationship as sex for pleasure is replaced by sex for procreation, and a once satisfying, spontaneous, and intimate act becomes paired with repeated failure (Leiblum, 1997; Pepe & Byrne, 2005). Patients also describe feeling a loss of control given that fertility investigations and treatments are focused on the most intimate and private parts of their lives and bodies.

If treatment fails or couples reach the end of their emotional or financial resources, they must make the painful transition to biological childlessness (Daniluk, 2001a; Daniluk and Tench, 2007; Leiblum, Aviv, and Hamer, 1998). For Americans this transition occurs in a context where parenthood is seen as central to constructing meaning in one's life and is viewed as a key milestone in adult development. There are few acceptable alternative models of healthy and normative female development for women who are childless, Mardy S. Ireland (1993) explains. In a society where *family* is defined by parental status, those whose biological childlessness is permanent must construct a healthy identity and a meaningful life that does not include the norm of biological parenthood (Daniluk, 2001a). Once treatment fails and the option of parenting their biological progeny is exhausted, couples also must determine which, if any, other parenting options—such as adoption—are available and acceptable to them. Research suggests that in time most couples come to terms with their biological childlessness and live satisfying lives, whether or not they elect to pursue other parenting options such as adoption (Daniluk, 2001a).

### POLICY ISSUES

The creation of life outside of the private act of intercourse carries with it considerable ethical, moral, and legal consequences and raises important questions. Reproductive science and technology have advanced and continue to advance at a rate that outpaces society's ability to respond proactively to the potential implications of these newly created family forms. Children can now be born after one or both of their genetic parents have passed away, families can be intentionally created with only one parent, children can be born into families with no knowledge of or information about their genetic fathers or mothers, parents can have their embryos screened to ensure that their children have particular desired characteristics (e.g., gender), children can be created for the express purpose of being tissue or organ donors for a sick sibling, women can gestate and give birth to a child to whom they have no genetic connection, mothers can carry children for their infertile daughters, and women in their fifties and sixties can give birth to children through the use of donated eggs and sometimes sperm. While the governments in many countries of the world (e.g., Australia, the U.K., and Canada) have imposed regulations on the fertility industry, no such national regulations existed in the United States in the early 2000s. Each state had its own laws regarding the acceptability of particular treatments—resulting in reproductive tourism, couples traveling to other states to access treatment options not available to them in their home state.

The issue of cost is also problematic, given that insurance coverage for reproductive treatments is not available through the majority of managed health-care plans. In




***10 Places with the Lowest Total Fertility Worldwide.*** *Average number of children per woman, 2000–2005.* CENGAGE LEARNING, GALE.

1998 Garcia estimated the cost of a live birth through in-vitro fertilization (IVF) to be $66,000, meaning that advanced reproductive technologies are restricted to the economically privileged. Although some fertility centers offer couples who cannot afford treatment the option of cost reduction or deferral if the patient agrees to donate a percentage of her eggs to another couple, serious concerns have been raised about the ethics of this exchange.

Questions also have been raised about the rights of children who are conceived using third-party reproduction to know the circumstances surrounding their conception and to have information about their medical and genetic histories. There is ambiguity and lack of regulatory laws concerning suitable compensation for surrogates and gestational carriers and concern about the economic coercion of young women to become egg donors to offset their personal debts or educational costs. The birth of twins in 2006 to a 67-year-old single woman in Spain has also reignited the worldwide debate about the upper age at which women, and in some cases their male partners, should be able to use technology to pursue a pregnancy. At the heart of the debate is concern about the health and mortality of these older mothers, which may preclude their ability to raise their children to adulthood.

Although the American Society for Reproductive Medicine has created best practice guidelines for the provision of fertility treatments, physicians and health care providers who are not members of ASRM are not bound by these guidelines. Clearly there is much work to be done to deal with the immediate and long-term ramifications for the individuals and families involved in these treatments and for the children created as a consequence.

**SEE ALSO** Volume 1: *Adopted Children;* Volume 2: *Adoptive Parents; Childlessness; Menopause.*

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# J

## JOB CHANGE

Over the course of their working lives, individuals often change jobs. Sometimes this mobility is involuntary, as when workers are permanently laid off or fired and must seek new employment. More commonly, workers choose to change jobs in search of better pay or benefits, more interesting work, or to find an arrangement that better accommodates family responsibilities. Job changes play an important role in shaping workers' career trajectories over the life course.

### JOB CHANGES OVER THE LIFE COURSE

Job changing is particularly common during the early career. Economic models suggest that workers will look for new jobs when they believe they can offset the costs of the search by finding a new position that offers higher wages, better working conditions, or other benefits. ''Job shopping'' is particularly useful for workers who lack experience in the labor market because it helps them discover which jobs will be most rewarding. Over time, workers should improve the quality of their job matches, reducing the likelihood of making gains by switching (Burdett, 1978).

In the period after World War II, ultimately settling down and staying with an employer offered important advantages to a substantial share of workers. Robert Althauser and Arne Kalleberg (1981) explained that in exchange for investing in skills and training of value to their current employer, but not necessarily of value to a wide array of other potential employers, workers were rewarded for seniority, gaining job security and regular pay raises. The ideal-typical pattern of job mobility over the life course was thus one of early job changes succeeded by long-term stable employment with a single employer.

### TRENDS IN JOB CHANGING

In recent years, there has been concern that changes in the U.S. economy have weakened bonds between employers and workers, with more and more workers experiencing multiple spells of short-term employment (Baron & Pfeffer, 1998). Studies assessing this possible phenomenon typically measure the flip side of job changes—how long jobs last (job stability). Most commonly, researchers measure trends in job stability by studying changes in tenure distributions (the share of workers who have remained with their employers for different lengths of time) or retention rates (the likelihood that jobs will last for a specified period of time). Although stability has declined in some industrialized countries, a study by the Organisation for Economic Co-operation and Development (1997) showed that this is not a universal trend. In the United States, overall job stability declined between the 1970s and early 1980s, was relatively stable between the 1980s and 1990s, and then declined between the late 1980s and mid-1990s (Neumark, Polsky, & Hansen, 1999).

Although job stability has not declined substantially overall, research by David Neumark, Daniel Polsky, and Daniel Hansen (1999) revealed differences among subgroups. Between the 1970s and 1990s, job stability in the United States declined most sharply for Black workers, both male and female. At the same time, job stability rose

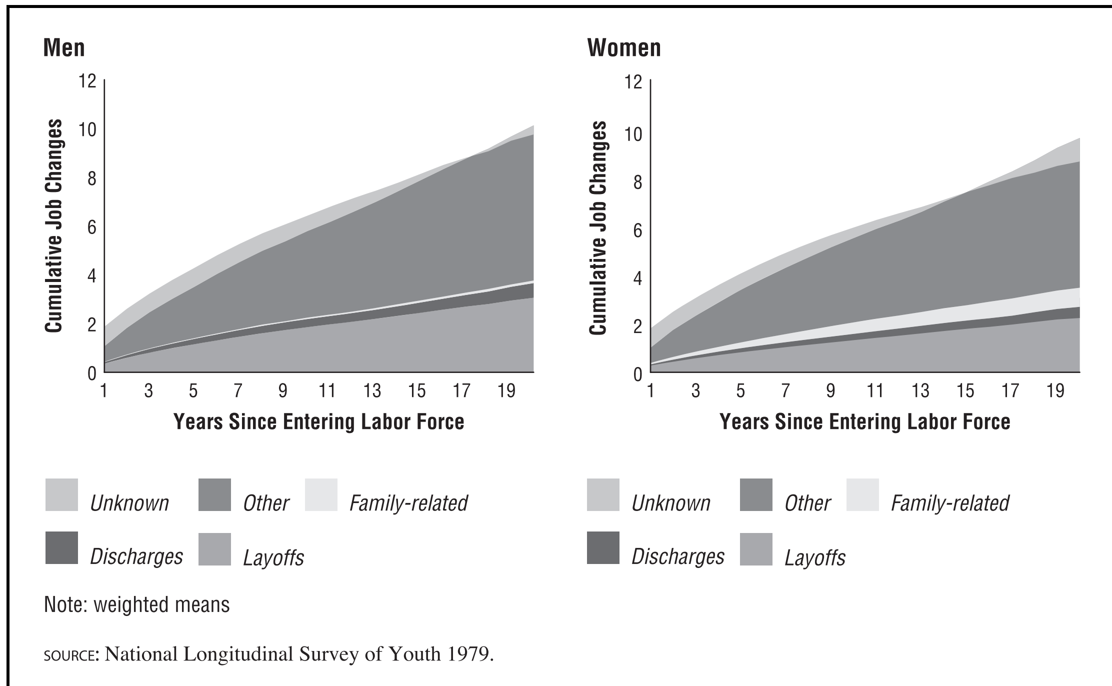


***Figure 1.*** *Cumulative job changes of American workers during the first 20 years in the labor force (1979–2004).* CENGAGE LEARNING, GALE.

among White women as their attachment to the labor market increased. Throughout the 1980s younger workers and those who had started their jobs relatively recently experienced declines in stability, but in the first years of the 1990s job stability declined more among workers who had held their jobs for a relatively long time.

## JOB CHANGE PATTERNS

Not all workers follow the same job change trajectories. Workers in European countries and Japan tend to change jobs less frequently than their North American counterparts (Organisation for Economic Co-operation and Development, 1997). Industry, occupation, and worker characteristics all shape the likelihood of job changes in each country. Employers have less incentive to reward worker loyalty with job security or wage premiums when their jobs are not perceived to require specialized skills. In the United States, according to Paul Ryscavage's analysis in 1997, workers are most likely to stay with the same employer in public administration, manufacturing, transportation, communication, and other utilities and least likely to stay with the same employer in entertainment, recreation services, agriculture, forestry, fisheries, personal services, and business services. Worker characteristics are also associated with differences in job change patterns. On average, younger workers, the less educated, and women are more likely to leave their jobs (Ryscavage, 1997).

Workers also differ in the types of job changes they undergo. The best information about these patterns is based on longitudinal data from surveys of younger workers. Among young men, Hyunjoon Park and Gary Sandefur (2003) found that higher turnover among Black and less educated workers is largely a function of their higher likelihood of involuntary job changes. Gender differences in cumulative voluntary job changes and layoffs are not large among younger workers, but Sylvia Fuller (2008) indicated that women are more likely to leave jobs for family-related reasons and are less likely to be discharged. Overall, younger women are less likely than younger men to leave employers for a better job but more likely to experience a period of nonemployment between one job and the next. These differences largely reflect the behavior of less educated women, particularly African Americans and Hispanics (Alon & Tienda, 2005).

## CONSEQUENCES OF JOB CHANGES

The consequences of job changes are not inherently positive or negative. Worker flows between jobs are an important mechanism by which labor markets adjust as some occupations, industries, and regions experience faster job growth than others. For employers the ability to change the size of the workforce by hiring or laying off workers provides an important source of flexibility. Changing jobs offers workers the possibility of finding more desirable work. Indeed, for young workers in

particular, studies by Robert Topel and Michael Ward (1992) reported a substantial share of wage growth occurs via job mobility.

At the same time, job changing can have a darker side. Whereas voluntary job changes and those whereby a worker moves directly from one job to another typically raise wages; layoffs, discharges, family-related job changes, and changes that involve an intervening period of unemployment or labor force withdrawal usually result in wage losses. Moreover, even the threat of job loss is stressful. Perceptions of job insecurity can negatively affect physical and mental health according to Magnus Sverke, Johnny Hellgren, and Katharina Näswall (2002).

Work by Audrey Light (2005) showed that the outcomes of mobility are also worse for workers who change jobs more frequently. In part this is because workers who experience frequent mobility tend to spend more time not employed (Light, 2005). There is also some evidence for a high-mobility penalty, suggesting that workers who change jobs frequently are stigmatized by employers (Fuller, 2008). High-mobility workers may also experience less social protection because regulatory and welfare systems have been built on a normative model of employment that presumes a relatively stable career. In the United States, for example, job changes commonly result in a loss of employer provided health insurance (Ryscavage, 1997).

### FUTURE DIRECTIONS FOR RESEARCH

Contemporary research on job changing largely focuses on isolated or one-time events. More research that investigates patterns and consequences of different types of job changes over the course of workers' careers is needed. Closely attending to how institutional contexts shape job changes is also needed to clarify reasons for cross-national differences in job mobility patterns and trends. Further research is necessary to understand how variation in job mobility norms across occupational and industrial sectors shapes the consequences of job changes.

Job change patterns and their consequences reflect institutionalized opportunity structures arising from the organization of labor markets and households, as well as normative expectations about how careers should unfold for men and women over the life course. For individuals, they are often turning points in career trajectories, shifting the pace or direction of economic mobility.

**SEE ALSO** Volume 2: *Careers; Economic Restructuring; Employment, Adulthood; Occupations.*

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***Sylvia Fuller***

# JOB CHARACTERISTICS AND JOB STRESS

For most individuals, working for pay is an important social role during adult life. However, the experiences people have on the job and over the working career vary considerably, due in part to differences in the characteristics of their jobs. Particular job characteristics can contribute to job stress and in turn affect individual well-being and family functioning. Differences in job characteristics and job stress thus help to explain differential life trajectories between socially advantaged and disadvantaged groups.

### DEFINING AND MEASURING JOB CHARACTERISTICS AND JOB STRESS

Jobs have been characterized on a variety of dimensions. A key conceptual distinction is between what could be

labeled *objective* or *structural* job characteristics—those easily visible to an outside observer and similar for all incumbents in a particular occupation—versus more *subjective* or *psychosocial* job characteristics—those that depend on a worker's interpretation of working conditions. Objective job characteristics that have been linked to job stress include physical and environmental exposures (i.e., heavy labor, hazardous conditions, exposure to loud noise, heat, or fumes), scheduling of work hours (i.e., night hours and shift work), number of hours worked (i.e., part time, full time, or overtime hours), and the type of employment contract held—standard (full time, with expectation of continued employment) versus nonstandard (part-time, temporary, independent contracting, etc.). Robert Karasek's (1979) model of job strain, which posits that jobs that combine low control over tasks with high demands are more hazardous to health than jobs that have one or neither of these conditions, is central to analyses of the psychosocial characteristics of jobs. A related model is Johannes Siegrist's (1996) conceptualization of effort-reward imbalance, which characterizes jobs for which workers expend high effort but receive low rewards. Another important subjective stressor is perceived job insecurity.

Most of these job characteristics can be classified as chronic, or ongoing, stressors. When an individual faces a threatening stressor, the brain and body respond by releasing both adrenaline and adrenocortical hormones in the so-called fight-or-flight response. In the short run, this response can help a person to respond to a stressful situation. However, if a person is persistently exposed to a stressor and does not have the means to cope with it, dysregulation of the body's response system can occur, leading to health problems (McEwen & Seeman, 1999). While the physiological stress response is the same for everyone, it is clear that people exposed to the same job characteristic are not necessarily affected in the same way. Workers appraise conditions differently, and have differential access to coping resources, social support, and mastery (a global sense of control), all of which could protect against negative consequences of job stress (Pearlin & Skaff, 1996). In addition, whereas some negative job characteristics are relatively normative for certain phases of the life course, such as greater job insecurity early in the career, these work-related stressors may be more harmful to well-being if they occur at nonnormative points in the life course, such as among older workers.

Two main approaches have been used to study job characteristics and job stress. Some studies have relied on more objective observational data about the job characteristics of specific occupations, collected by employers reporting on the characteristics of their workers' jobs (i.e., how many are temporary employees); by governments recording occupational exposures, accidents, or fatalities; or by expert raters who observe a job and report on its characteristics (i.e., the degree to which a worker must work under pressure of time). Other studies have used survey self-reports by workers themselves about their working conditions, such as their perceived job strain, job insecurity, or work-life conflict.

A debate remains about whether objective observational data, collected by an outsider, or more subjective self-reports, collected from surveys of workers, are a better source of information for understanding the consequences of job stress. Workers' self-reports are the most sensitive measures of an individuals' actual experience on the job because conditions vary considerably even within the same occupation, and because workers also have different levels of coping resources, social support, and mastery. However, self-reports are also vulnerable to a worker's reporting style. Some individuals may report negatively about both their job characteristics and their well-being for other reasons, creating an artificial association between the two. For example, people with high levels of neuroticism may evaluate both their job characteristics and their well-being negatively. Using information about job characteristics obtained from someone other than the worker avoids this problem of spurious association, but provides only a rough estimate of conditions experienced by the many different workers in a given occupation. Furthermore, measures based on outsider observation are costly to collect and the information can become out-of-dateif it is collected infrequently because working conditions in a given occupation often change over time.

## TRENDS AND PATTERNS IN JOB CHARACTERISTICS

Job characteristics change as economies transition from agricultural, to industrial, to postindustrial forms of production. The relative importance of physical and environmental hazards at work declines as fewer individuals hold agricultural and manufacturing jobs, whereas the importance of psychosocial stressors rises as the dominance of the service sector grows. When wealthier countries transition toward service-based economies, they often export physically and environmentally hazardous jobs to nations with fewer regulations and more workers willing to perform these jobs for low pay. For example, maquiladoras on the Mexico side of the U.S.-Mexico border employ manufacturing workers who earn ten times less than their counterparts in the United States (Frey, 2003). However, increasing globalization also means that psychosocial stressors, notably perceived job insecurity, may rise for workers in wealthier countries. This is true even for higher-status workers, whose job security falls as technological innovation and the push for enhanced flexibility and competitiveness lead to organizational restructuring and layoffs.

The United States labor market at the turn of the 21st century has seen the creation of new jobs that can be divided roughly into a smaller group of *good* jobs with favorable characteristics and a larger group of *bad* jobs with less favorable characteristics and a higher risk of generating job stress. Many so-called bad jobs in the growing service sector are in customer service occupations (i.e., fast-food restaurant worker), and can be characterized by high strain and low pay, job insecurity, nonstandard employment contracts, and few traditional employment benefits. Ethnic minorities, immigrants, and less-educated people are overrepresented among those in bad jobs, perpetuating inequalities over the life course that these groups face. The gap between advantaged and disadvantaged workers in terms of job characteristics appears to be widening in the United States, though risks such as job insecurity are increasing even for many better educated and higher status workers (Sweet & Meiksins, 2008).

## CONSEQUENCES OF JOB CHARACTERISTICS AND JOB STRESS

Considerable research has assessed the consequences of job characteristics and job stress for health outcomes or impaired family functioning among workers across the globe. For example, hard physical work and environmental stressors such as noisy surroundings and dangerous conditions are associated with a variety of outcomes, including increased risk of retiring due to disability among Norwegian employees (Blekesaune & Solem, 2005) and greater risk for work-related injuries among Canadian workers (Karmakar & Breslin, 2008). Jobs involving physical labor and noxious environmental stressors often are held by less-educated workers who have fewer options on the labor market, and these experiences contribute to the poorer health profiles overall for people with low education.

Work schedules, hours, and types of contracts are also linked to worker health. For example, shift work is associated with depressive symptoms among Swedish workers (Bildt & Michelsen, 2002), and overtime hours have been associated with poorer perceived health, more work-related injuries and illnesses, and even increased mortality for U.S. workers (Caruso, Hitchcock, Dick, Russo, & Schmit, 2004). Nonstandard contracts have been linked to a higher risk of traumatic and fatal occupational injuries among temporary workers in Spain when compared to their counterparts with standard contracts (Benavides, Benach, Muntaner, Delclos, Catot, & Amable, 2006). However, the consequences of work scheduling, hours, and nonstandard employment contracts may vary depending on the resources and preferences of the job incumbent. In postindustrial economies, for example, overtime work is increasingly performed by highly-educated professionals, so future research is needed to understand how socially advantaged workers manage these conditions.

Turning to the psychosocial stressors, job strain has been linked to higher risk for cardiovascular disease in an array of studies (Belkic, Landsbergis, Schnall, & Baker, 2004), to musculoskeletal symptoms (Smith & Carayon, 1996), and to poorer mental health (Van der Doef & Maes, 1999). Effort-reward imbalance is associated with a similar array of negative outcomes, including increased risk of cardiovascular disease, depression, alcohol dependence, and poor self-rated health (Siegrist & Marmot, 2004). Finally, perceived job insecurity has been linked with self-rated health and psychiatric morbidity in a variety of contexts (Ferrie, Shipley, Stansfeld, & Marmot, 2002). While job strain appears to be more common for less skilled workers, this and other psychosocial stressors are reported by socially disadvantaged and advantaged workers alike.

Work-family conflict is associated with a variety of clinically significant mental health consequences among U.S. workers, but more attention has been directed at the consequences for family functioning. Either mental distress arising from negative job characteristics or a sense of conflict between work and home roles—work and family strains are mutually influential—can lead to poorer family relations and functioning. In particular, work-family conflict has been linked to lower marital dissatisfaction and various measures of family strain (Allen, Herst, Bruck, & Sutton, 2000). Specific job characteristics are also associated with poorer family functioning. Job strain, for example, is associated with more frequent marital disagreements among U.S. workers (Hughes & Galinsky, 1994), and nonstandard schedules are associated with depressive symptoms in parents, hostile and ineffective parenting, and children's emotional and behavioral difficulties in Canadian dual earner families (Strazdins, Clements, Korda, Broom, & D'Souza, 2006). Finally, some studies suggest that families headed by military personnel may be particularly affected by extreme and unusual job stress, such as that arising from exposure to war (Malia, 2007).

Ample evidence reveals that job characteristics and job stress have meaningful consequences for the well-being of workers and their families, yet gaps in understanding persist. First, many studies have relied on data collected at a single point in time. Life course experiences are dynamic, and point-in-time estimates cannot capture the accumulation of exposure to job characteristics that differentiate careers. For example, some individuals stay employed consistently and proceed on a trajectory of improving job characteristics and rewards, whereas

others are unable to escape conditions of high job stress. Some studies have showed that stressors such as job strain have a stronger effect when experienced persistently (Chandola et al., 2008), but more longitudinal data collection on a variety of job characteristics is needed to understand how they accumulate and change over the life course. Longitudinal data with repeated measurements of a variety of negative and positive job characteristics would also be useful for understanding whether and how individuals act to change jobs or adjust their careers in response to these stressors, what kinds of workers are able to do so, and how this might affect health and family functioning.

## SOCIAL AND POLICY ISSUES

The workplace and the labor force are continuously evolving, and important issues of social inequality and public policy remain. First, social inequality in the distribution of negative job characteristics and job stress has persisted even though labor force composition and workplace organization are changing. Men with high levels of education and skills are generally exposed to fewer onerous job characteristics, whereas many women, ethnic minorities, and people with less education are exposed to more objective or psychosocial stressors on the job. Moreover, people with more education and financial resources may have more stable levels of mastery or other social supports under stressful conditions than people with lower levels of these socioeconomic resources, helping them to manage the stressors they do face. The consequences of these social inequalities in the distribution of desirable jobs are heavily influenced by social contexts. For example, many western European nations provide relatively generous social safety nets and have higher levels of unionization, providing some level of protection for workers from across the social spectrum. By contrast, the United States provides few institutionalized supports for workers, even those in undesirable jobs.

Second, as populations age and life expectancies rise, some older workers are remaining in the workforce longer, whether because they choose to, or because they cannot afford to retire. This will increase their life course exposure to job stress as they reach ages at which health typically begins to decline. Individuals with heavy caregiving responsibilities for children or aging parents are also increasingly working for pay, leading to heightened work-family conflict for many dual earner families and single parents, and perhaps especially for women. These and other contemporary labor force conditions are a poor fit with work policy and social practices developed in the post–World War II (1939–1945) U.S. context of the male breadwinner, manufacturing-centered economy, with a standard retirement age. For example, access to unemployment insurance and health insurance coverage, on-the-job training, retirement benefits, and other benefits is often limited or absent for the growing number of workers with nonstandard employment contracts. Policies such as the Family and Medical Leave Act (FMLA) of 1993 were enacted to meet the challenges faced by working families in the United States, but many workers are not eligible because of the size or characteristics of their employer, or cannot afford to take advantage of unpaid leave even if they are eligible.

Finally, research must continue to address the issues of intervention and regulation. While the Occupational Safety and Health Administration (OSHA) and similar governmental bodies regulate some of the gross physical and environmental hazards that characterize some jobs, regulatory capacity has weakened in the United States. Moreover, there are few, if any, regulations on psychosocial stressors in the workplace. The appropriate interventions for stressors such as job strain are not entirely clear. Some have argued that it can be difficult to show that psychosocial stressors have a causal effect on well-being, whereas material resource deficits, such as low education or poverty, are more strongly linked to health and well-being. Because in most cases high levels of psychosocial stressors are the burden of people who also have relatively low material resources, this argument suggests that intervention may best be directed at improving the material resources of disadvantaged workers. Such policies would likely include wealth redistribution through progressive taxation. Others argue that restructuring and reorganizing work to reduce job stress could be a useful public health intervention, even apart from supports to improve material conditions for workers (Singh-Manoux, Macleod, & Smith, 2003). Issues of social inequality and questions about appropriate public policy will continue to be central to an understanding of the importance of job characteristics and job stress across the life course.

**SEE ALSO** Volume 2: *Economic Restructuring; Employment, Adulthood; Health Differentials/ Disparities, Adulthood; Occupations; Policy, Employment; Stress, Adulthood; Work-Family Conflict.*

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# L

## LEISURE AND TRAVEL, ADULTHOOD

The theme of consistency and change underlies the study of leisure over the life course. Individuals start building their leisure repertoires in childhood, and many of these activities remain consistent as people encounter different life stages, even as new ones are added (Kelly, 1982). The everyday definition of leisure is either free time (i.e., time that is not spent at work) or participation in enjoyable activities such as sports, hobbies, or watching television. However, the concept is actually remarkably slippery and complex. As a result, scholars have been debating the definition of leisure for more than 30 years. Leisure, along with work and family roles, is an important aspect of successful adult development and has implications for well-being over the life course.

### WHAT IS LEISURE?

Leisure has been defined as free time or, more specifically, residual time, the time left over after all of an individual's daily obligations are met (Neumeyer & Neumeyer, 1958). Some argue that the concept of residual time does not allow for freedom of choice, a central component of leisure, and question whether time is ever completely free from obligations. Thus, the term *discretionary time* was adopted (Murphy, 1974). Over the years, defining leisure in terms of time use worked, because measures of time use are easily quantified. Using time-budget studies, researchers documented differences in time use between men and women (Shaw, 1985), across occupational categories (Burdge, 1969), across countries (Zuzanek, Beckers, & Peters, 1998), and across historical periods (Schor, 1991). However, in the 1980s scholars increasingly recognized that the concept of leisure as the opposite of work might not be relevant for everyone, particularly the unemployed, stay at home mothers (or fathers), and retired persons. Researchers initially assumed that those not engaged in paid work did not have time off from work and, therefore, could not experience leisure. Thus, scholars moved away from defining leisure as free time.

The definition of leisure as activity, particularly pleasurable activity, developed in parallel with definitions that emphasized time use. This meant that leisure activities were non-work and encompassed such pursuits as hobbies, sports, travel, and outdoor recreation. Defining leisure as activity makes it easy to quantify, so researchers could develop activity inventories to document the most popular activities (Havighurst, 1957) and study participation by gender (Shaw, 1985), race (Floyd, et al., 1994), and age (Witt, 1971). However, if the freedom to choose is a central dimension of leisure, then defining leisure solely in terms of activity obscures the meaning behind the pursuit. This meaning may vary over time and situation. John R. Kelly (1982) points to the differences between playing basketball in a physical education (PE) class as opposed to playing pick-up basketball after school with friends. For some, basketball in a PE class is not leisure because of the obligation associated with it. Feminist scholars also questioned defining leisure in terms of activity, particularly for mothers who are responsible for organizing family activities. Are these family "leisure" activities perceived as leisure by women who organize them, or are they underpinned by a strong sense of obligation? (Shaw, 1992).

***Pleasure Cruise.*** *Ann Duprey feeds squid to sting rays during a shore excursion to Sting Ray City from the cruise ship Norwegian Pearl in the Atlantic ocean during a western Caribbean cruise.* AP IMAGES.

Taking the lead from several classic books in the 1960s in which leisure was described as "a state of being" (de Grazia, 1964, p. 5) or "a mental and spiritual attitude" (Pieper, 1963, p. 40), Neulinger (1974) suggested that the central elements of leisure were the *perceived* freedom to choose an intrinsically motivated experience. He proposed that this perception of freedom and motivation could be measured by assessing one's attitudes. In contrast, Kelly (1982) argued that the full array of meanings associated with leisure could not be captured by perceptions and attitudes alone. Rather, he suggested that leisure reflects the quality or meaning of the activity, intrinsic motivation, and *relative* freedom. This latter criterion reflects the recognition that no choice is ever truly free from influence of social constraints or contexts. The concept *relative freedom* was adopted by feminist scholars, such as Erica Wimbush and Margaret Talbot (1988), who felt that it described women's experiences of leisure in relation to the social forces shaping and constraining their lives.

With the advent of the 24-hour, global, technologically-driven society of the 21st century, Kelly (1999) continued to refine his definition of leisure. In postindustrial society, he reasoned, the boundaries between work, family, and leisure were often hard to distinguish. Moreover, psychologists such as Mihály Csikszentmihalyi (1990/1991) found that people often experience "flow" (i.e., a state of feeling fully immersed in and energized by what they are doing) in the work place. To reconcile these psychological and social perspectives, Kelly suggested that leisure as action is existential (in that it is meaningful and produces meaning) and social (in that it is influenced by society as well as frequently experienced with others).

Thus, the dominant definition of *leisure* used by scholars in the early 21st century encompasses more than activity or free time. It is an experience characterized by

freedom and meaning that also has social aspects. British scholars of leisure tend to critique this definition as being too individual and psychological. Many U.K. scholars are sociologists, whereas in the United States, social psychology has been the dominant paradigm guiding leisure scholarship (Coalter, 1999). However, a framework that includes both the existential and social qualities captures the essence of leisure and provides a foundation for understanding the role and place of leisure in societies where traditional assumptions about time, space, social structure, and social roles are increasingly blurred.

## RESEARCH ABOUT LEISURE

Leisure scholars around the world have amassed a large body of knowledge about leisure as a central life domain as well as its interactions with other life domains such as work or family (Kelly & Freysinger, 2000). In the 1970s and 1980s, researchers examined leisure over the life cycle (Kleiber & Kelly, 1980; Osgood & Howe, 1984), life course (Parker, 1976), or family life cycle (Kelly, 1982; Rapoport & Rapoport, 1975; Witt & Goodale, 1981). A consistent theme in this work is that leisure is characterized by stability and change. Leisure facilitates the completion of specific socio-psychological life tasks, such as finding a partner or maintaining connections with one's community during retirement. At the same time, leisure is shaped by the responsibilities and demands of life stages, events, and transitions. For example, after the birth of children, leisure tends to become more home-centered, and participation in risky activities, particularly adventure sports, is often curtailed.

Some scholars have adopted specific models from life span developmental psychology to examine stability and change in both leisure (Carpenter, 1992; Iso-Ahola, Jackson & Dunn, 1994) and travel choice (Gibson & Yiannakis, 2002). However, whereas some scholars are still proponents of using a life span or life course perspective, most scholars have moved away from this focus and now examine specific life stages such as adolescence (Shaw, Kleiber, & Caldwell, 1995), where leisure provides a context for individuation, identity formation, and experimentation and midlife, where leisure is a context for family bonding and stress relief (Freysinger, 1995).

In addition to investigating leisure in reference to age or life stage, a number of other research foci are evident. In the 1970s and 1980s motivation was a dominant theme. A number of scales were developed, such as Jacob G. Beard and Mounir G. Ragheb's (1983) Leisure Motivation Scale, which identified four sub-dimensions of leisure motivation: competence/mastery, social, stimulus avoidance, and intellectual. The motivations that guide leisure choices are believed to depend on the individual's socio-psychological needs. Conversely, Seppo E. Iso-Ahola (1980) viewed leisure motivation in terms of optimal level of stimulation (OLS); thus, individuals who are stressed and operating above their preferred OLS seek experiences for escape. By contrast, individuals who feel understimulated may seek out activities that provide challenge, novelty, and social interaction.

Around the world, the study of leisure has been integrally tied to recreation and parks provision and management. In North America much of this research uses a benefits framework. Rather than focusing on motivation, the benefits approach looks at outcomes as a philosophy (i.e. the belief that leisure is positive), a framework for empirically demonstrating these outcomes, and a management strategy (Driver & Bruns, 1999). Four types of benefits have been identified:

1. Personal Benefits are both psychological (e.g., identify affirmation) (Haggard & Williams, 1991) and psycho-physiological (e.g., physical fitness). For example, James F. Sallis and Neville G. Owen (1999) found that people who live in communities with a larger number of recreation facilities are more likely to be physically active.
2. Social and Cultural Benefits are linked to social bonding in families (Orthner & Mancini, 1991) and community satisfaction (Allen, 1990).
3. Economic Benefits, which include monetary gain or value, have been documented by a myriad of economic impact studies. For example, John L. Crompton (2001) found that people who live near parks and trails profit in the form of added value to price of their home.
4. Environmental Benefits take the form of additional green spaces in communities, a justification for conservation, particularly if economic benefits accrue from a park in the form of tourism (Sellars, 1997).

Another issue driven by both academic and practical concerns is access to leisure via public parks, both at the local municipal level as well as at state and national parks and other federal lands. This issue has received attention on both sides of the Atlantic, but from different perspectives. In the United Kingdom research focused on social class differentials in access (Coalter, 1998), whereas in North America, research focused on barriers or constraints to leisure participation. Duane W. Crawford and Geoffrey Godbey (1987) in a seminal paper identified three types of constraints that affect leisure participation: intrapersonal (e.g., attitudes, motives, values), interpersonal (e.g., preferences shaped by family, friends), and structural (e.g., time, money). Prior to this the focus had been largely on structural constraints such as time and money, when in fact researchers found intrapersonal

and interpersonal constraints more powerful in shaping leisure participation patterns for both participation or non-participation. This thinking was formalized in the hierarchical model of constraints whereby the three sets of constraints were assumed to be encountered sequentially (Crawford, Jackson, & Godbey, 1991).

However, the hierarchical nature of constraints received little empirical support, particularly as researchers such as Susan M. Shaw, Bonnen, and McCabe (1991) found that the persons with the most constraints participated in leisure activities more frequently and that socio-structural variables were more powerful than previously thought in shaping choices. These findings were supported by others; for example, Tess A. Kay and Guy A. Jackson (1991) found that individuals participate in leisure activities despite constraints, so the idea of constraint negotiation emerged, meaning that "where there is desire an individual will find the way" to take part in preferred leisure activities (Jackson, Crawford & Godbey, 1993). Hubbard and Mannell (2001) established empirically that constraint negotiation has a positive relationship with motivation to participate. This idea receives support from Diane Samdahl and Nancy Jekubovich's (1997) work that indicated people change their routines, such as work schedules, to take part in their favorite activities. In the early 2000s researchers generally believe that constraints are not experienced equally by everybody. While time and money constraints are consistently cited over the life span, this relationship is U-shaped, with people aged 30 to 50 being particularly constrained, whereas cost of participation shows a negative relationship with age, cost being the most important constraint for the younger age groups (Hinch et al., 2006).

Constraints in the form of gender-based inequalities have been the focus of feminist leisure scholars. From the 1980s on, in response to the invisibility of women in previous leisure research (Henderson, 1994), scholars began to identify gender differences in access to leisure, primarily within the context of the family. In North America, working primarily from a symbolic interactionist perspective, researchers suggested that women's leisure was determined by socialization practices, which shaped their activity choices and tended to perpetuate traditional gender roles (Henderson & Bialeschki, 1991). The reinforcement of traditional gender roles was also used to explain why women who are mothers did not enjoy the same assess to leisure as men in terms of time. Shaw (1992) found that women in dual income families spent more time on domestic tasks than their partners, their leisure tended to be family centered, and family leisure was more often work-like than leisure-like. Bella (1992) in a study of family Christmas celebrations found that women often felt obligated to ensure that all of the Christmas rituals were performed, while simultaneously caring for family and children. The ethic of care has been frequently used to explain women's attitudes towards leisure. Learned through socialization, the ethic of care, which emphasizes care of others before self care (Gilligan, 1982), explains why many women do not feel entitled to their own leisure and feel guilty when they take time for themselves (Henderson & Bialeschki, 1991). As feminist research progressed through the 1990s, a shift in thinking focused on leisure as a space where women can resist structural forces and can exercise more control over their lives (Shaw 1994; Wearing, 1998).

Current threads in leisure research reflect recent concerns among both scholars and the public. As immigration becomes a global challenge, the role of leisure in adjustment to life in a new country has received more attention (Stoldolska, 2000). Likewise as different racial and ethnic groups become more prominent in the United States, researchers have begun to examine them. For example, studies have focused on Hispanic leisure (Allison, 2000), whereas in the past most work examined the leisure and recreational experiences of African Americans and whites (Floyd et al., 1994). Another debate centered on the loss of social capital (Putnam, 2001) and stimulated research on the role of leisure and recreation in building social capital (Glover & Hemingway, 2005). A related issue is whether people lack time for leisure and civic engagement (Robinson & Godbey, 1997; Schor, 1991).

This line of research returns to definitions of leisure as free time with all of its disadvantages. However, by providing information that can be compared across different countries and socio-historical periods, time budget data is a good starting point for understanding time pressures and how people deal with them. A portion of this research examines vacation patterns and attitudes to work (de Graaf, 2003). Leisure philosophers studying attitudes towards leisure in different countries and historical periods note that the pervasiveness of the Protestant work ethic explains U.S. attitudes towards leisure and vacation time (Sylvester, 1999); the United States is often cited as one of the most "vacation starved" countries. Taken together, leisure research shows how personal pursuits are molded by larger social, cultural, and economic contexts. Understanding the ways that macrosocial influences and individual preferences shape leisure over the life course is a critically important question that will occupy leisure scholars for decades to come.

**SEE ALSO** Volume 2: *Consumption, Adulthood and Later Life; Time Use, Adulthood;* Volume 3: *Leisure and Travel, Later Life.*

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***Heather J. Gibson***

## LIFE EVENTS

Life events are objective experiences that have definable starting and ending points. Formal changes in social roles—for example, getting married, becoming a parent, or retiring from work—represent one type of life event. These are often referred to as *life transitions* because they signal passage from one recognizable social status to another (Moen and Wethington, 1999). Changes in social roles act as markers or placeholders in the life course, positioning individuals at different stages of life (Chiriboga, 1997). Another type of life event is a commonly experienced social milestone, for example, obtaining a driver's license or getting a first job.

Life events may require changes in daily routines and behaviors to accommodate new roles and responsibilities, even those that are an anticipated part of normal daily life. These adjustments may increase the risk of mental or physical illness (Holmes and Rahe, 1967). In addition to physical or behavioral adjustments, life events may initiate psychological adjustments, particularly those that are unexpected; for example, divorce or death of a loved one may initiate changes in the way people see themselves or the world around them. Life experiences that initiate a reevaluation of one's current circumstances or purpose in life are referred to as *turning points.* A turning point alters the way people perceive themselves, their social roles, and their relationships (Wethington, Brown, & Kessler, 1997). The impact of life events on well-being is often greater when events are perceived as undesirable. *Traumas* are an extreme example of undesirable life events. Traumas are particularly disruptive and shocking life events, for example, experiencing a violent crime, combat duty, or a life-threatening illness. The magnitude and suddenness of these events may disrupt a person's mental and physical well-being long after the occurrence of the event (Pearlin, 1999).

### ASSESSING EXPOSURE TO LIFE EVENTS

Checklists are the predominant method for measuring exposure to life events. One of the earliest checklists, the Social Readjustment Rating Scale (SRRS), was developed by stress researchers Thomas Holmes and Richard Rahe (Holmes and Rahe, 1967). Life event checklists consist of an inventory of potentially life-changing situations that may have occurred over a specified period of time, typically over the past 6 months or past year.

Respondents indicate which of the events they have experienced. Some checklist measures tally the responses to estimate total exposure to potentially life-changing events and thus total impact on a person's life. Other checklists weight life events by their normative severity (the degree of disruption for an average person), for example, weighting death of a loved one as more severe than changing employment. This approach, however, does not account for individual circumstances that may alter the impact of the event: For example, death of a loved after a long illness may be experienced as less severe than an unexpected job loss. To account for individual circumstances, some checklists ask the respondent to rate the severity of the event. In this approach, however, respondents may be rating the severity of *consequences* of the event in addition to or instead of the event, for example, financial or relationship difficulties following a job loss. This approach makes it difficult to separate the effects of an event and the response to it.

A limitation of the checklist approach is the need to restrict the number of possible life events that respondents could have experienced. The original SRRS scale, for example, consisted of 43 events. Using the SRRS as a model, life event checklists have been refined to include events relevant to particular life stages, such as adulthood (Paykel, Pursoff, & Uhlenhuth, 1971), or to a common health condition, such as pregnancy (Barnett, Hanna, and Parker, 1983). Another limitation is the inability to distinguish between events and ongoing difficulties that precipitate an event, for example marital strain preceeding a divorce or leading to a job change. Despite these limitations, checklists are a

popular and inexpensive way to examine exposure to life events in large and diverse populations.

Investigator-led interviews are an alternative approach to assessing exposure to life events. A personal interview approach involves one-on-one discussions between an investigator (interviewer) and the respondent (the study subject). The interviewer typically begins by asking questions about the respondent's recent experiences in varying domains of life (e.g., births, deaths, employment, health). The investigator probes the respondent for additional information about the circumstances surrounding each event experienced using open-ended questions to obtain in-depth narrative information. The investigator then uses the information to classify experiences into appropriate categories (e.g., life event, health issue, ongoing difficulty), to pinpoint the timing of the event (e.g., June of last year vs. within the past 12 months), and to assess the perceived severity or impact of the event within the context of the respondent's life. The interview approach offers a way to obtain information on a broader range of life events respondents may encounter over the life course. With this approach, the investigator assesses the occurrence of an event and the perceived severity of its impact. Because the interview approach is both expensive and time-consuming, it is most often used in smaller studies, studies that require more accurate timing of events (e.g., for predicting onsets of serious illness), and studies focusing on variations in response to exposure to a specific life event (e.g., death of spouse, retirement) (see Wethington et al., 1997 for a more complete discussion).

## THE IMPACT OF LIFE EVENTS ON HEALTH AND WELL-BEING

The foundation for life events research began more than 50 years ago. Early animal laboratory experiments established a biological pathway through which external stimuli initiated a physiological response, commonly referred to as the *fight or flight response* (Cannon, 1939). Subsequent laboratory experiments with human subjects demonstrated that in addition to physical stimuli (e.g., hot, cold, shock), exposure to psychological stimuli (e.g., anticipation of shock) could also initiate physiological changes (Selye, 1956). Life events research emerged from an interest in studying people's responses to the situations of everyday lives (Sapolsky, 1999).

Studies examining the impact of life events on health and well-being may be separated into three types of outcomes: psychological disturbances, physical disorder and disease, and maladaptive behaviors.

*Psychological disturbances* include a range of effects from minor psychological distress or negative affect, to acute affective disorders, for example, major depression or anxiety disorder. Studies based on both general and clinical populations reveal a strong link between life events, particularly undesirable and uncontrollable events, and increases in psychological disturbances, including distress (Paykel, 1979) depression (Brown & Harris, 1978) (see Tennant, 2006 for a more complete review). The majority of these studies find that it is the perceived severity or significance of an event, rather than the objective occurrence of a particular type of event, that accounts for the impact. Thus, undesirable events impact psychological well-being by threatening individuals' self-image, or sense of control such as unanticipated medical expenses or physical discomfort after a car accident (Thoits, 1983). Consistent findings can be found in studies of older adults (Clémence, Karmaniola, & Green, 2007) and children (Bouma, Ormel, Verhulst, & Oldehinkel, 2008), as well as in international epidemiological (Marmot, Davey Smith, Stansfeld, Patel et al., 1991) and clinical samples (Rojo-Moreno, Livianos-Aldana, Cervera-Martinez, Dominguez-Carabantes et al., 2002).

Studies on the relationship between adverse life events and onset of depression provide the most compelling evidence that exposure to life events directly provokes psychological disturbances (Brown, Harris, & Hepworth, 1994). However, not everyone exposed to a life event, even a very serious event or trauma, responds in the same way. Previous exposure to life events, ongoing life difficulties, and available resources, lifestyle, and genetic factors all contribute to both the risk of experiencing a life event and individual variability in responses to life events as well as to overall vulnerability to subsequent life experiences. Experiencing a major depressive episode, for example, appears to predispose individuals to subsequent depressive episodes, without the occurrence of a subsequent life event (Kendler, Thornton, & Gardner, 2001).

The pathway between exposure to life events and *physical disorder and disease* is more indirect, as changes in physical health occur over long time intervals. Whereas severity of unexpected and undesirable life events most often precede psychological disturbances, total amount of change or cumulative change are more important determinants of disease and physical disorders (McEwen & Seeman, 1999). Recent exposure to life events has been shown to trigger physical disturbances, such as heart attack (Tennant, 1987). Exposure to life events is also associated with increased symptoms of existing physical disorders such as coronary heart disease (see Tennant, 1999 for a review). Exposure to more negative life events is associated with diminished physical functioning and health (Surtees & Wainwright, 2007). Because it takes time for diseases and disorder to develop, life events are not typically the immediate cause of physical disease or disorder but may precipitate acute physical (e.g., heart attack) or mental (e.g. depression) reactions in vulnerable populations.

Exposure to life events may initiate *changes in behavior* to response to changing life circumstances (Cohen & Herbert, 1996). Studies have demonstrated associations between exposure to life events and alcohol addictions (Lloyd & Turner, 2008), eating disorders (Steinhausen, Gavez, & Metzke, 2005) and sleep disturbances (Vahtera, Kivimäki, Hublin et al., 2007). While life events may precipitate behavioral changes, behavioral and life choices may also increase the likelihood of experiencing life events, for example, drinking and driving.

## POLICY IMPLICATIONS AND FUTURE DIRECTIONS

Exposure to life events, particularly adverse life events, is not random. Age, gender, and social status influence the type, the frequency, and the impact of life events (Pearlin, 1982), with individuals of lower socioeconomic status at-risk for increased exposure to adverse life events. Without adequate resources to address life's adversities, these individuals are also at increased risk for exposure to subsequent adverse events. This erosion in daily life experiences contributes to the disparity in physical health status and mortality rates by socioeconomic status (Marmot et al., 1991).

The impact of adverse life events on health and well-being is well established, ushering in a new phase in the study of the relationship between exposure to life events and physical and mental health. Health and well-being in adulthood does not result from a single adverse life event; each stage of life is both the consequence of prior experiences as well as the antecedent for subsequent life experiences (Spiro, 2001). A single event may also trigger related stresses that carry additional emotional/physical costs, such as financial difficulties or marital strain following a job loss. The impact of early exposure to adverse life events, such as abuse or parental divorce, may persist well into adulthood.

In addition to the lingering effects of early life events, people's daily lives consist of balancing the demands of interrelated social roles, particularly in adulthood. Disruptions in spouse/partner relationships, parenting, and employment may lead to disruptions in another domain (Pearlin, Menaghan, Lieberman, & Mullan, 1981). The loss of a job, for example, may be followed by ongoing financial instability and subsequent loss of possessions (e.g., car, house) or relationship difficulties leading to an accumulation of difficulties as a consequence of the initial event (Pearlin, Aneshensel, & LeBlanc, 1997). Thus, there is increased need to consider the cumulative impact of life events and other life experiences across the life course (Elder, George, & Shanahan, 1996). Thus, physical and emotional well-being across the life course requires a more complete assessment of both episodic and recurring circumstances of social and environmental of life.

**SEE ALSO** Volume 2: *Job Change; Midlife Crises and Transitions; Stress in Adulthood; Trauma.*

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***Joyce Serido***

## LIVING TOGETHER

**SEE** Volume 2: *Cohabitation.*

# M

## MANNHEIM, KARL

***1893–1947***

Karl Mannheim, a European sociologist, developed the field of the sociology of knowledge. His theoretical work on how people's understanding, ideas, and knowledge of the world are influenced through their membership in generations (or birth cohorts) was an important contribution to the sociology of the life course.

Mannheim was born into a Jewish family in Hungary, where he studied and then taught at the University of Budapest. During his tenure there, Hungary experienced political turmoil from 1918 to 1920: A short-lived Communist government was followed by a military uprising, violence, and the restoration of the monarchy. Mannheim left Hungary, initially moving to Austria and then to Germany, where, in 1921, he married a Hungarian psychologist, Juliska Lang. Mannheim held academic posts in Germany at the universities of Heidelberg and Frankfurt. The rise of Nazism forced Mannheim to leave Germany in 1933. He spent the rest of his academic career in England, working as a lecturer in sociology at the London School of Economics and, later, as a professor of education at the University of London.

Mannheim's (1952) theoretical essay on generations is the most relevant publication for understanding his contribution to the sociology of the life course. For Mannheim, knowledge (defined by him as a style of thought or worldview) is socially conditioned by membership in a generation (or birth cohort). People of different generations therefore have distinct and "definite modes of behaviour, feeling, and thought" (p. 291).

For Mannheim (1952), a person's generational membership arises from the "biological rhythm in human existence—the factors of life and death, a limited span of life, and ageing" (p. 290). Mannheim emphasized, though, the overriding and ultimate influence of social factors, so that biological aging must be understood as embedded within social and historical processes. This view became a foundation of the life course perspective.

In Mannheim's (1952) analysis, it is during the life course stage of youth that experiences, ideas, and impressions gel together, stabilize, and form "a natural view of the world" (p. 298). Individuals then carry this with them throughout the remainder of their life course. People are therefore crucially influenced by the sociohistorical context that predominated during their youth. In this way, adult generations are formed, each with distinctive historically determined worldviews. Mannheim therefore suggests that, at a given point in time, adults in different life course stages will not share the same view of the world because of different formative experiences during their youth.

Mannheim proposed that in order to share generational location in a sociologically meaningful sense, individuals must be born within the same historical and cultural context and be exposed to particular experiences and events during their formative years. More specifically, Mannheim argued that not every member of a generation will be exposed to exactly the same experiences because of variations in geographical and cultural locations during youth. He also recognized that whereas some groups within generations will actively participate in the key social and cultural events of their time, other groups will not. Moreover, among actual (or active) generations, responses to

social and cultural events can differ in that they may be oppositional or supportive.

Mannheim's (1952) work on generations also illuminates links between the life course and social change. Mannheim proposed that the likelihood of a youthful cohort developing a distinctive worldview (i.e., of becoming a generation) is dependent on the pace of social change. In turn, generations are regarded by Mannheim as a key element in the production of social change. The "fresh contact" of new adult cohorts with the preestablished social and cultural heritage always means a "changed relationship of distance" and a "novel approach" to doing things (p. 293). The progression of social change is made smoother by the presence of intermediary generations, which act as a buffer between those generations with the greatest difference in worldviews or styles of thought. In times of accelerated social change, however, when the tempo of change quickens, the new generations have even greater opportunity than the natural, gradual changeover allowed by the aging and eventual death of all members of a birth cohort.

Beyond his contribution to life course studies via his work on generations, Mannheim writings engaged more broadly with the social conditioning of knowledge, including the structural positioning of intellectuals and their role in society. Linked to this, Mannheim's work increasingly became concerned with the planned social reconstruction of societies through the application of social policy (including education) to counter both totalitarianism and individualism and sustain democracy.

**SEE ALSO** Volume 3: *Cohort; Ryder, Norman.*

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## MARRIAGE

Marriage is a legal contract or socially recognized agreement between two individuals and their families to form a sexual, productive, and reproductive union. Through marriage, a union is recognized by family members, other members of society, religious institutions, and the legal system. Marriage defines the relationship of the two individuals to each other, to any children they might have, to their extended families, to shared property and assets, and to society in general. It also defines the relationship of others, including social institutions, toward the married couple.

The key features of most marriages include a legally binding, long-term contract or socially recognized agreement; sexual exclusivity; coresidence; shared resources; and joint production. In polygamous societies, the circle of sexual exclusivity expands to include multiple spouses, who might have separate residences. Spouses acquire rights and responsibilities with marriage, enforceable through both the legal systems and through social expectations and social pressure. Marriage differs from other, less formal relationships primarily in its legal status and social recognition. Because marriage is a legally or socially recognized contract, the treatment of marriage in the law and custom shapes the institution, and recent changes in family law in some societies appear to have made marriage less stable.

Historically, in the United States and many other countries, both secular and religious law generally viewed marriage vows as binding and permanent. The marriage contract could only be broken if one spouse violated the most basic obligations to the other and could be judged at fault in the breakdown of the marriage (Regan, 1996). Beginning in the mid-1960s, however, states in the United States substantially liberalized and simplified their divorce laws. One of the key features of this change was a shift from divorce based on fault or mutual consent to unilateral divorce, which requires the willingness of only one spouse to end the marriage. Most states also adopted some form of no-fault divorce, which eliminates the need for one spouse to demonstrate a violation of the marriage contract by the other.

The shift to unilateral or no-fault divorce laws was accompanied by a surge in divorce rates in the United States. At least some of the increase in divorce rates appears to have resulted directly from the shift in the legal environment in which couples marry and decide whether to remain married (Friedberg, 1998). The link between divorce rates and laws that permit unilateral divorce has lead several states to develop alternative, more binding marriage contracts, such as covenant marriage, in which partners agree to seek help for marital problems and to a mandatory period of separation prior to the consideration of getting divorced.

Its status as a legal contract and the features of permanence, social recognition of a sexual and childrearing union, coresidence, shared resources, and joint production lead to some of the other defining characteristics of marriage. Because two adults make a legally binding and socially supported promise to live and work together for their joint well-being, and to do so, ideally, for the rest of their lives, they tend to *specialize*, dividing between them the labor required to maintain the family. One person may become an expert at cooking and the other at cleaning or money management. This specialization allows married men and women to produce more than they would if they did not specialize. Any division of

labor tends to increase productivity; couples do not need to divide family work along traditional gender lines to reap these benefits. The coresidence and resource sharing of married couples lead to substantial economies of scale; at any standard of living it costs much less for people to live together than it would if they lived separately. Both economies of scale and the specialization of spouses tend to increase the economic well-being of family members living together.

The institution of marriage assumes the sharing of economic and social resources and coinsurance. Spouses act as a small insurance pool against life's uncertainties, sharing responsibility if things go wrong and reducing their need to protect themselves by themselves against unexpected events. Marriage also connects spouses and family members to a larger network of help, support, and obligation through their extended family, friends, and the community. The insurance function of marriage also increases the economic well-being of family members, and the support function improves their economic and emotional well-being.

The institution of marriage builds on and fosters trust. Because spouses share social and economic resources, and expect to do so over the long term, both gain when the family unit gains. This reduces the need for family members to monitor the behavior of other members, increasing efficiency.

The vast majority of adults marry at some point in their lives, both in the United States and in other countries. Most young adults in the United States plan to marry and rank a happy marriage and family life as one of their most important goals (Thornton & Young-DeMarco, 2001). Thus, marriage is a key component of the life course, and one around which other important transitions, such as moving into the workforce and residential and financial independence, are positioned.

## TRENDS, PATTERNS, AND DIFFERENTIALS

**Age at Marriage** In the United States, age at marriage declined in the first half of the 20th century, but then rose dramatically. Entering the 21st century, men and women in the United States are marrying later than at any other time in past decades (Fitch & Ruggles, 2000). Between 1970 and 2000 the median age of first marriage for women increased by almost 5 years, from 20.8 to 25.1, and for men the median age increased by almost 4 years, from 23.2 to 26.8 (Fields & Casper, 2001). In this same time period, the proportion of women who had never been married increased from 36% to 73% among those 20 to 24 years old and from 6% to 22% among those 30 to 34 years old. Similar increases occurred for men (Fields & Casper, 2001).

For African Americans, the delay of first marriage has been especially striking. The median age at first marriage increased to 28.6 for African-American men, and 27.3 for African-American women (Fitch & Ruggles, 2000). This represents a 6-year increase from about 22 for African-American men and a 7-year increase from about 20 for African-American women since the 1960s. And, in 2000 among those 30 to 34 years old, 44% of African-American women and 46% of African-American men had never married (Fields & Casper, 2001).

Similar changes in marriage patterns have taken place in most European countries; cohorts reaching

| | Males | | | Females | | |
|---|---|---|---|---|---|---|
| | Total | Black | White | Total | Black | White |
| 1960 | 69.3 | 60.9 | 70.2 | 65.9 | 59.8 | 66.6 |
| 1970 | 66.7 | 56.9 | 68.0 | 61.9 | 54.1 | 62.8 |
| 1980 | 63.2 | 48.8 | 65.0 | 58.9 | 44.6 | 60.7 |
| 1990 | 60.7 | 45.1 | 62.8 | 56.9 | 40.2 | 59.1 |
| 2000 | 57.9 | 42.8 | 60.0 | 54.7 | 36.2 | 57.4 |
| 2005[(b)] | 55.0 | 37.9 | 57.5 | 51.5 | 30.2 | 54.6 |

[a]Includes races other than Black and White.
[b]In 2003, the US Census Bureau expanded its racial categories to permit respondents to identify themselves as belonging to more than one race. This means that racial data computations beginning in 2004 may not be strictly comparable to those of prior years.

SOURCE: U.S. Bureau of the Census, Current Population Reports, Series P20-506; America's Families and Living Arrangements: March 2000 and earlier reports; and data calculated from the Current Population Surveys, March 2005 Supplement.

***Figure 1.*** *Percentage of all persons age 15 and older who were married, by sex and race, 1960–2005 United States[a].* CENGAGE LEARNING, GALE.

| Year | Males | Females |
|---|---|---|
| 1960 | 88.0 | 87.4 |
| 1970 | 89.3 | 86.9 |
| 1980 | 84.2 | 81.4 |
| 1990 | 74.1 | 73.0 |
| 2000 | 69.0 | 71.6 |
| 2005 | 66.2 | 67.2 |

SOURCE: US Bureau of the Census, Statistical Abstract of the United States, 1961, Page 34, Table 27; Statistical Abstract of the United States, 1971, Page 32, Table 38; Statistical Abstract of the United States, 1981, Page 38, Table 49; and US Bureau of the Census, General Population Characteristics, 1990, Page 45, Table 34; and Statistical Abstract of the United States, 2001, Page 48, Table 51; internet tables (http://www.census.gov/population/socdemo/hh-fam/cps2005/tabA1-all.pdf) and data calculated from the Current Population Surveys, March 2005 Supplement. Figure for 2005 was obtained using data from the Current Population Surveys rather than data from the census. The CPS, March Supplement, is based on a sample of the US population, rather than an actual count such as those available from the decennial census. See sampling and weighting notes at http://www.bls.census.gov:80/cps/ads/2002/ssampwgt.htm

***Figure 2.*** *Percentage of people, ages 35–44, who were married (by sex), 1960–2005.* CENGAGE LEARNING, GALE.

adulthood recently are marrying at older ages and over a wider range of ages than in the past. However, European countries differ substantially in marriage ages. The Nordic countries of Sweden, Denmark, and Iceland show the highest average ages at marriage for women (around age 29), primarily because these countries have high rates of cohabitation, and the eastern European countries of Bulgaria, the Czech Republic, Hungary, and Poland show the lowest (around age 22). Because societies with a relatively high age at marriage also tend to be those in which many people never marry, this diversity suggests that marriage is a more salient component of the family in some European countries than others.

Marriage typically takes place at substantially younger ages in Africa, Asia, and Latin America than in North America and Europe. The average mean age at marriage among countries in the developed regions is almost 28 for men and 25 for women, compared to 25 for men and 21 for women in the less developed regions of the world. Young average ages at marriage are common in some parts of Africa (such as Uganda, Chad, and Burkina Faso), in some parts of Asia (such as India, Nepal, and Indonesia), in the Middle East, and in eastern Europe. Within regions of the world, women and men in developed countries tend to marry at older ages than those living in less developed countries. For example, in Southeast Asia women's age at first marriage is about 27 in Singapore and about 22 in Indonesia. Men tend to marry at older ages than women, but the gender gap in average age at marriage varies quite substantially both within and between regions. The gap tends to be the largest where women marry relatively early (United Nations, 2000), perhaps because in these countries women are less likely to work for pay and thus depend on their husbands for financial support.

**Proportion Married** In the United States, age at marriage has risen substantially, divorce rates are high and stable, and rates of remarriage have fallen, so that a larger proportion of adults are unmarried now than in the past. In the United States in 1970, unmarried people made up 28% of the adult population. In 2000, 46% of adults were unmarried. In fact, the shift away from marriage has been so dramatic for Blacks that only 39% of Black men and 31% of Black women were married in 2000, compared to 59% of White men and 56% of White women (Fields & Casper, 2001).

Countries in Europe show a great deal of variation in the proportion of women in marital unions. Marriage is most common in Greece and Portugal, where more than 60% of women ages 25 to 29 are married, and least common in the Nordic countries, Italy, and Spain, where one-third or less are married (Kiernan, 2000).

In spite of increases in the age at first marriage in some countries, the vast majority of adults marry at some time in their lives, with the proportion of those who were ever married by age 50 reaching more than 95% of both men and women. Relatively high proportions of men and women have not married by their late 40s in the Nordic countries, where cohabitation is common, and in Caribbean countries such as Jamaica and Barbados, countries characterized by a long history of informal unions or visiting relationships. In Sweden, for example, 76% of men and 84% of women in their late 40s had ever

married, and in Jamaica, 52% of men and 54% of women had ever married by these ages (United Nations, 2000).

Increasingly, couples form intimate unions by cohabiting, with marriage following at some later point unless the relationship dissolves. In the United States, only 7% of the women born in the late 1940s cohabited before age 25 compared to 55% among those born in the late 1960s (Raley, 2000). The percentage of marriages preceded by cohabitation increased from about 10% for those marrying between 1965 and 1974 to more than 50% of those marrying between 1990 and 1994 (Bumpass & Lu, 2000). Cohabitation is especially common among people whose first marriage dissolved (Brien, Lillard, & Waite, 1999).

Although a number of European countries have experienced similar increases in cohabitation, some have experienced much more and some much less. Cohabitation is strikingly common in the Nordic countries of Denmark, Sweden, and Finland, and France also shows fairly high levels, with about 30% of women ages 25 to 29 being in cohabiting unions. In these countries, cohabitation has many of the legal and social characteristics of marriage. A group of countries including the Netherlands, Belgium, Great Britain, West and East Germany, and Austria show moderate levels of cohabitation—between 8 and 16% of women ages 25 to 29 are in this type of union. And in the southern European countries, as well as in Ireland, cohabitation is rare with less than 3% cohabiting among women ages 25 to 29 (Kiernan, 2000). Societies in which cohabitation is rare also tend to have fairly low rates of unmarried childbearing and tend not to recognize cohabiting unions as alternatives to marriage.

Perhaps the most perplexing issue facing researchers studying marriage in the United States revolves around the rapid and dramatic divergence of family patterns and processes between Whites and Blacks. In about 1950, the proportions of Black and White adults who were married was quite similar. Black men and women show little evidence of the substantial decline in age at marriage that characterized the baby boom of the 1950s and early 1960s for Whites in the United States, and show a much more rapid rise in age at marriage since that time (Fitch & Ruggles, 2000). In the mid-1990s, almost twice as many Black men as White men were not married (Waite, 1995), with a similar differential for women. Joshua Goldstein and Catherine Kenney (2001) have found a dramatic decline in the proportion of Black women predicted to ever marry, especially among those who are not college graduates, whereas marriage remains virtually universal among Whites. The proportion of births to unmarried women is three times as high for Blacks as for Whites (Martin, Hamilton, Ventura, Menacker, & Park, 2002). Although numerous hypotheses for this divergence have been put forward, none explains more than a small portion of the racial gap in family patterns.

## CHANGES IN THE NATURE OF MARRIAGE

Under the family mode of social organization, which has at its core the married couple, kin groups tend to pool resources, including their labor, specialize in particular tasks, coordinate their activities, and connect to the larger community as a unit. In polygamous societies, the married couple may include a spouse with other wives, with pooling of labor among cowives, or other combinations. In patriarchal societies power often resides in the elders in the family, and in men. The family mode of social organization is often associated with agricultural production, but it appears in a wide range of economic environments (Thornton & Fricke, 1989).

The family mode of social organization has been altered as a result of other, far-reaching social changes, including the rise of the market economy, vast increases in productivity with concomitant increases in real income (Fogel, 2000), urbanization, changes in ideology toward greater individualization (Lesthaeghe, 1995), and changes in the structure of education. All of these changes have shifted decision-making and social control away from the family and toward the individual or other social institutions. As families have less control over the time and resources of children, they are less able to influence marriage choices—whether, when, and whom to wed. As more people support themselves through wage-based employment rather than through work on a family farm or small business, families have less stake in the property and family connections that a potential marriage partner brings, and, accordingly, young adults acquire more autonomy in marriage choices (Caldwell, Reddy, & Caldwell, 1983). Urbanization and electronic communication have made one's spouse and family a less important source of companionship and entertainment now than when most people lived on farms or in villages (Burch & Matthews, 1987).

In developed industrial societies such as the United States, the family retains responsibility for reproduction, socialization, coresidence, and the transmission of property across generations. It is the main unit of consumption and often also produces considerable amounts of goods and services. Families provide care and support for both the young and the old. Although older adults receive financial transfers and access to medical care from the government in many societies, they still receive the vast majority of their help and support from family members (Logan & Spitze, 1996), and children are almost entirely dependent on their families for financial, emotional, and instrumental support. However, the more modern family less often consists of a married couple, their children, and other relatives than in the past.

At the same time, the social and economic bases for marriage have changed, especially in postindustrial

societies such as the United States and Britain. Many social thinkers point to a shift toward companionate marriage and intimate relationships, in which the relationship exists primarily to meet the emotional needs of the partners, to be discarded when needs change (Giddens, 1992). Fulfillment of the emotional needs of both partners is a weak reed upon which to build a long-term relationship, making such marriages fragile. The movement of women into advanced education, often at rates equal to men, and into the paid labor force has eroded—but not eliminated—the economic basis for marriage. More women earn enough to support themselves and their children should they be unable or unwilling to marry or stay married (Waite & Nielsen, 2000). Changing attitudes about sex outside of marriage have made some of the services provided by marriage available to those who are not married. And changing gender roles, including rises in women's employment and changing expectations for men's participation in family life, seem to have led to increased conflict in marriage (Amato & Booth, 1995). All these changes have, according to some scholars, weakened the social institution of marriage and made marriages less stable than they were under different conditions.

The married, two-parent family has been the most common family form in the United States and other industrialized countries for some centuries. But even at the height of the married couple family era, many people lived in other types of families, most often due to the death of one member of the couple before all the children were grown (Watkins, Menken, & Bongaarts, 1987). When death ended many marriages relatively early in life, remarriage and stepfamilies were common, as were single-parent families caused by widowhood. High rates of divorce combined with relatively low rates of remarriage, especially for women with children, have been shown to lead to sizable proportions of families with a divorced single mother. The rise of cohabitation and nonmarital childbearing has meant that unmarried-couple families and never-married mother families are now common alternative family forms.

In the United States families consisting of a married couple with children fell from 87% in 1970 to 69% in 2000. The percent of single-mother families rose from 12% to 26%, and that of single-father families rose from 1% to 5%.

One alternative family form consists of two adults of the same sex, sometimes raising children. About 2.4% of men and 1.3% of women in the United States identify themselves as homosexual or bisexual and have same-gender partners (Laumann, Gagnon, Michael, & Michaels, 1994). Although information on the number and characteristics of gay and lesbian couples has not generally been available in the United States, one estimate suggests that in 1990 fewer than 1% of adult men lived with a male partner and about the same percentage of adult women lived with a lesbian partner (Black, Gates, Sanders, & Taylor, 2000). These estimates are based on responses to the unmarried partner question in the U.S. Census and are thus thought to be conservative estimates of the numbers of same-sex cohabitors. This is the case because some of those living in gay and lesbian couples do not identify as such in survey and other data. Legal and social recognition of these unions as marriages is generally not available in the United States. Dan Black and colleagues (2000) have estimated that about 25% of gay men and 40% of lesbian women are currently in or previously were in heterosexual marriages.

## MARITAL QUALITY AND DYNAMICS

The life course of marriage has held endless fascination for scholars of the family and for the lay public since research on the family began. This literature points quite consistently to a pattern in which marital happiness was highest at the onset of marriage, with fairly sharp declines over the next few years, followed by further but somewhat slower declines as children were added to the family, grew up, and left home. At this point, most studies showed that marital happiness tended to rebound, although to levels somewhat lower than during the honeymoon phase (Glenn, 1990), so that marital happiness has a sort of U-shaped relationship over the life course: high at the beginning and at the end and low(er) in the middle.

A number of theoretical explanations have been advanced for changes in marital quality over the course of the marriage. One focuses on transitions in family and other roles and structures. Families tend to add children during the early years of marriage, and the presence of young children has been associated with declines in marital quality, perhaps because of conflicts over childrearing, a shift in attention and resources away from the couple toward their children, and increases in stress. Movements of women into the labor force, changes in family income, retirement, and health all may occur over the life of a marriage, perhaps changing the way in which individuals evaluate their marriages.

A second theoretical perspective points to the social psychological processes that take place in any couple, from the bliss of the falling-in-love stage through adaptation, habituation, and disillusionment. Early expectations of lifelong passion run headlong into the realities of getting dinner on the table and the laundry done. In addition, people may change over time in ways that make them less compatible than they were when they married. This developmental perspective on marriage suggests that changes in happiness are a fundamental part of the course

of any relationship and are not because of changes in social circumstances, social roles, or family structure.

A third perspective argues that the world has changed in ways that have reduced happiness for all marriages. These include changes in gender relations, especially a shift from breadwinner-homemaker families toward dual earner families, in which both spouses provide income and care; increasing individualism and acceptance of divorce, both of which seem to erode relationship quality and stability by reducing investments in marriage; and an increase in economic uncertainty, especially for those with relatively low levels of education, resulting in increasing stress. In a comparison of marriages in two generations of people, those married during the 1970s and those married during the 1980s, when they had been married for the same number of years, Stacy Rogers and Paul Amato (1997) found that those in the younger generation reported less marital interaction, more marital conflict, and more problems in their marriages than the older generation did at the same points in their marriages.

Research that has tracked marital happiness over the course of the marriage among the same people married to the same spouse shows no support for the U-shaped relationship so common in the literature. Jody VanLaningham and colleagues (2001) found that marital happiness either declines continuously over the course of the marriage or that happiness declines over a long period and then stabilizes, but does not rebound. The authors suggest that the declines in marital happiness they observe are because of a mixture of developmental processes intrinsic to marriage in which spouses become habituated and thereby less happy, and because of shifts in the larger society and culture that have reduced support for the institution of marriage and increased the demands placed upon it, especially the demand to meet the emotional needs of the partners, introducing new sources of stress and instability.

## THE CONSEQUENCES OF MARRIAGE

As a result of the characteristics of the institution of marriage discussed above, marriage changes the behavior of spouses and thereby their well-being. The specialization, economies of scale, and insurance functions of marriage all increase the economic well-being of family members, and the increase is typically quite substantial. Generally, married people produce more and accumulate more assets than unmarried people (Lupton & Smith, 2003). Married people also tend to have better physical and emotional health than single people, and at least part of this advantage is attributable to being married—rather than to selection effects (or those preexisting traits of persons who marry versus those who remain single) (Mirowsky & Ross, 2003). The social support provided by a spouse, combined with the economic resources produced by the marriage, facilitate both the production and maintenance of health.

Lee Lillard and Linda Waite (1995) find that both men and women show declines in the likelihood of dying when they marry, although these effects appear at marriage for men and cumulate with duration of marriage for women. Men who become unmarried show large increases in the chances of dying, net of other characteristics, regardless of whether their marriage ends with divorce, separation, or widowhood. For women, the end of a marriage through divorce or separation increases the risk of death (Hemström, 1996), but the death of the husband does not. Hilke Brockmann and Thomas Klein (2004) find similar results among West German adults; the health benefits of marriage accumulate over time, whereas the negative health consequences of being single, divorced, or widowed attenuate over time. The beneficial effects of marriage are nonlinear; they are most pronounced in the early years of marriage. Men benefit immediately from marriage, whereas women's mortality risk actually increases at first. Researchers find no evidence that these effects differ by marriage order (that is, whether it is a first or later marriage). Theodore Iwashyna (2001) finds that both men and women show increased risks of dying in the year following the death of their spouse.

A number of recent studies have attempted to assess the mental health consequences of marriage, divorce, and widowhood, and to separate these from the selection of emotionally healthy individuals into marriage and distressed or unhealthy individuals out of marriage. These studies followed individuals over time as some marry, some divorce or become widowed, and some retain their previous marital status. Consistently, transitions into marriage improve mental health, on average, for both men and women, and transitions out of marriage decrease it (Horwitz, White, & Howell-White, 1996; Marks & Lambert, 1998; Simon, 2002). It is important to note that although rates of mental illness are quite similar for men and women in the United States in the early 21st century, women show higher rates of affective and anxiety disorders, with symptoms of nonspecific anxiety, distress, and depression, whereas men have higher rates of antisocial personality and substance abuse dependence disorders, which manifest themselves in antisocial behavior and drug and alcohol problems (Kessler, McGonagle, Zhao, Nelson, Hughes, Eshleman et al., 1994).

Robin Simon (2002) finds that divorce increases symptoms of emotional distress among both women and men, but women show greater increases than men in depressive symptoms following divorce and men who marry show greater reductions in alcohol consumption

than do women who marry. Both men and women who divorce report a significant increase in alcohol abuse. Simon also finds men and women who divorced reported more depressive symptoms and more alcohol problems earlier than those who remained married, which she interprets as both a cause *and* a consequence of disruption.

Studies that control for the selection of the psychologically healthy into marriage, and also include a wider range of measures of mental well-being, find that although there are differences by gender in the types of emotional responses to marital transitions, the psychological benefits associated with marriage apply equally to men and women (Horwitz, White, & Howell-White, 1996; Marks & Lambert, 1998; Simon, 2002).

Of course, the complete picture is more complicated. Research has extended this line of work to examine differences in the consequences of marital transitions for women and men with various characteristics. This research shows considerable heterogeneity in effects and some surprising similarities.

It seems logical that people who enter marriage disadvantaged in some way, such as ill health, a criminal record, a prior divorce, children from a previous relationship, or poor emotional well-being, bring less to the marriage themselves and are likely to get less out of it than those without these problems. And both scholars and advocates have argued that those in marriages marked by violence, especially women, will gain enormously from leaving those relationships. However neither of these observations seems to find consistent empirical support.

One could argue that those with poor mental health prior to marriage would be less likely to marry and would benefit less from marriage than those with good mental health. Depression in one partner might limit the benefits that person could provide to a spouse, increase the demands on the other spouse, and reduce actual and perceived marital quality. But Adrianne Frech and Kristi Williams (2007) find, instead, that those who were depressed before they married show *larger* gains in emotional well-being than others, and that marital quality plays a similar role in moderating the effect of marriage on mental health for those who were depressed prior to marriage and those who were not. The patterns are similar for men and women. In fact, Frech and Williams find that the psychological benefits of getting married are quite modest for those who were not previously depressed and sizable only for those in poor mental health before marriage. These findings stand conventional wisdom on its head.

Another study does the same for marital violence. Matthijs Kalmijn and Christiaan Monden (2006) find, consistent with previous research, that divorce leads to higher levels of depressive symptoms for women but that men show no change. People who divorce from a marriage characterized by verbal aggression, the authors find, show a *stronger* increase in depressive symptoms than others who divorce. Their results also show that women who divorce from a marriage in which there was physical aggression see a *greater* increase in depressive symptoms than other women who divorce. They suggest that the conflict that characterized the marriage often continues or escalates after the divorce, and so continues to reduce emotional well-being.

To the extent that the benefits of marriage flow from the *state* of being married, then marital disruption, either through divorce or widowhood, interrupts the flow of benefits, which may consist of financial well-being, health, or social connections, remarriage reestablishes the flow of benefits. This suggests that the *duration* of marriage matters. Do transitions into a second or higher-order marriage bring benefits equal to those of a first marriage? In theory, later marriages bring all the same advantages—companionship, economies of scale, trust, social connection, and so on—that come with a first marriage. If later marriages bring the same levels and types of advantages, then spouses in these marriages should show outcomes equal to those of the once-married who had been married the same number of years.

Evidence on the benefits of remarriage is mixed, however. Both Anne Barrett (2000) and Nadine Marks and James Lambert (1998) find that higher-order marriages are less enhancing to mental health than first marriages. However, remarriage seems to undo the negative financial consequences of marital disruption, especially for women (Wilmoth & Koso, 2002).

In most societies, marriage circumscribes a large majority of sexual relationships. Data from the United States show that almost all married men and women are sexually active and almost all have only one sex partner—their spouse. Unmarried men and women have much lower levels of sexual activity than the married, in part because a substantial minority have no sex partner at all. (Just under one-quarter of the unmarried men and one-third of the unmarried women who were not cohabiting at the time of the survey had no sex partner in the previous year.) Men and women who are cohabiting are at least as sexually active as those who are married, but are less likely to be sexually exclusive (Laumann, Gagnon, Michael, & Michaels, 1994).

A key function of marriage is the bearing and raising of children. The institution of marriage directs the resources of the spouses and their extended families, especially time, money, attention, information, skills, and social connections, toward the couple's children, increasing child well-being.

## ISSUES REMAINING

Rapid changes in family processes in many postindustrial societies such as the United States mean that researchers

studying cohabitation, marriage, or even the family are aiming at a moving target. Defining each of these is both crucial and difficult. Must families be related by blood or marriage? If so, does a cohabiting couple constitute a family? Clearly not, under the current definition, because they share neither a blood nor legal tie. What if they have a child? Blood ties exist between the mother and the child and between the father and the child, so each of these constitutes a family. It becomes difficult to argue that this triad consists of two separate families, and much easier to argue that they form a single family, although the adults do not share a blood or legal tie.

What about a cohabiting couple with a child belonging only to the woman? The mother and child constitute a family, but does it include the man who lives with them but shares no blood or legal ties to either? It is difficult to say. The man has no legal responsibilities to either the woman or her child, and no legal rights as a husband or father. But the three may share powerful social, financial, and emotional bonds.

A central question becomes, "What *is* cohabitation?" Steven Nock (1995) has argued that cohabitation is incompletely institutionalized, leaving partners, their families, and others unsure about the nature of the relationship. Susan Brown and Alan Booth (1996) have suggested that cohabitation may be *several* institutions, each with distinct characteristics. One consists of couples who are engaged, have no children, and no previous marriages. These couples appear to be similar to married couples in their behavior and relationship outcomes. Another type of cohabitation includes couples with no plans to marry, with children (generally from a previous relationship), and at least one divorced partner. These couples seem to differ in important ways from more committed cohabitors and from married couples. So, scholars must ask, and continue asking, "What kind of a relationship is this? What are the rules under which the partners are operating? How does the relationship affect choices made by the members and by others? How does the existence of the relationship and its form affect the well-being of the individuals involved?"

Family scholars face as many questions about marriage. What are the irreducible characteristics of marriage? In the United States, same-sex couples are forbidden to marry, although in a few places they may register a *domestic partnership*. Opponents of granting same-sex couples access to marriage argue that, by definition, marriage must involve a man and a woman. Supporters argue that if marriage provides a wide variety of important benefits to participants, it is discriminatory to deny these to same-sex couples. Does a registered domestic partnership provide same-sex couples with the same benefits as marriage provides heterosexual couples? What *is* marriage?

## KEY POLICY ISSUES

**Gay and Lesbian Families** Historically and traditionally, a family consisted of people related by blood or marriage in a culturally recognized social network of biological and marital relationships. Marriage is a legal relationship between an adult man and an adult woman to form a new family. Gay and lesbian families, sometimes based on socially recognized or legally recognized relationship, challenge these definitions. Attitudes toward sex between two adults of the same sex have become substantially more accepting in the United States during decades leading up to the 21st century. Extension of the definition of *family* and *marriage* to same-sex couples has been hotly contested and fiercely debated. In the United States, many attempts to extend access to marriage and family rights to same-sex couples have been turned back by legislators or voters, with some notable exceptions. Several European countries have moved furthest on these issues. France now allows same-sex couples to register their partnerships, Denmark has extended child custody rights to same-sex couples, and the state supreme courts in Ontario, Canada, and Vermont have both ruled that same-sex couples are entitled to full and equal family rights. And, perhaps most definitively, the Netherlands has granted same-sex couples full and equal rights to marriage (Stacey & Biblarz, 2001).

Current theoretical issues surrounding marriage focus on the elasticity of the definition. Must marriage, by definition, include only adults of opposite sexes? Is it possible for two men to marry? Two women? An adult and a child? Two children? Clearly, in some societies, a husband may have more than one wife, although the reverse is rarely true (Daly & Wilson, 2000). And, theoretically, in countries such as Norway and Sweden, in which the legal distinction between cohabiting and married couples has shrunken to the point of vanishing, have cohabiting couples become *married*? Is this just a return to the common-law marriages of the past, or is it something different?

The forms and patterns of family life have shifted, quite noticeably in some countries and among some groups. But Homo sapiens developed as a species in conjunction with the development of the family, some would argue in conjunction with the institution of marriage (de Waal & Pollick, 2005). Humans' future and the future of the family are inextricably intertwined and always will be.

**SEE ALSO** Volume 1: *Transition to Marriage;* Volume 2: *Cohabitation; Dating and Romantic Relationships, Adulthood; Divorce and Separation; Dual Career Couples; Family and Household Structure, Adulthood; Gays and Lesbians, Adulthood; Mate Selection; Mental Health, Adulthood; Remarriage;* Volume 3: *Singlehood; Widowhood.*

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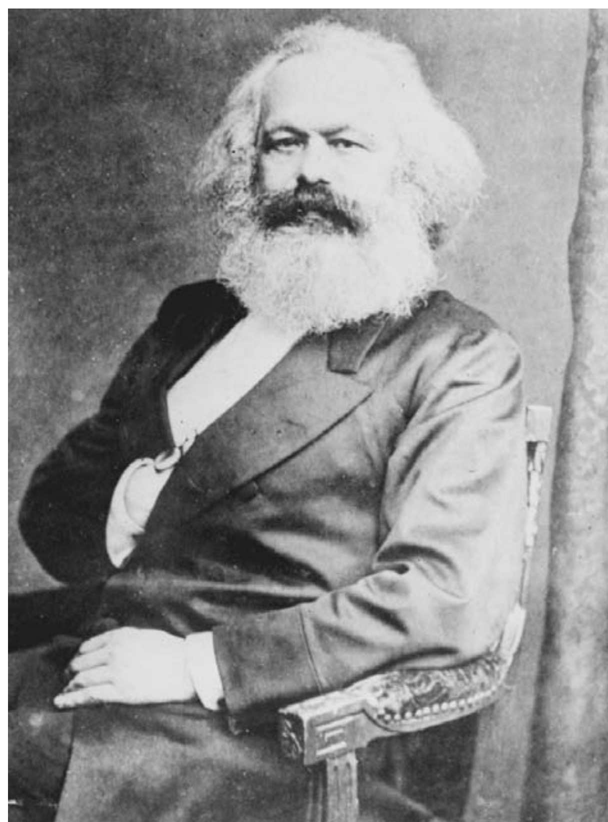
***Linda J. Waite***

# MARX, KARL

***1818–1883***

Karl Marx, a German philosopher, was a pioneer of the sort of interdisciplinary analyses that would later become integral to the life-course perspective. More famously and infamously, his was the voice that both criticized and drew from existing European socialism to define a movement that he called *Communism*. Marx's work derives from two additional currents: the philosophy of G. W. F. Hegel (1770–1831) and Ludwig Feuerbach (1804–1872) and the political economy of Adam Smith (1723–1790) and David Ricardo (1772–1823). Marx contributed some of the most enduring notions of social class and social conflict.



***Karl Marx.*** AP IMAGES.

Born in Trier, a town near the German border with Luxembourg and France, Marx grew up in an environment heavily influenced by French philosophy and politics. His early life included training in philosophy, history, and law. After receiving his university degree, he founded a series of radical newspapers both at home and abroad that were quickly suppressed. Because of this, Marx returned to his studies of history and political economy.

## MARX'S PHILOSOPHIES

Marx's emphasis on the importance of social class derived from these studies, which allowed him to chart the historical transition of the social classes in Europe during the modern period. He argued that a new class, called the *bourgeoisie*, was displacing the European aristocracy as the dominant political class. This often occurred through violent revolution, most notoriously in France. At the same time that the bourgeoisie was seizing political power, a new lower class was developing. Marx called this class the *proletariat*.

Unlike the bourgeoisie, the proletariat did not own any property apart from the capacities of its members to use their bodies to labor for a wage. As the industrial revolution advanced, members of the proletariat grew more numerous and clustered in industrial centers, especially London. Working conditions for the proletariat were deplorable. Marx pointed out that the working conditions of the proletariat poisoned the relationship that members of the proletariat had to their own activity. This proletariat worked only to live, and live minimally, a situation Marx called *alienation*.

Marx expected the proletariat to rise up in revolution against the bourgeoisie that dominated it, and he documented this expectation in his 1848 *Communist Manifesto*. Penned jointly with Friedrich Engels (1820–1895), who would be Marx's lifelong writing partner, the *Communist Manifesto* is one of the most widely dispersed documents of all time and has been read in many global contexts as an essential call of oppressed peoples to action.

Although Marx's attention to social class is both provocative and significant, his philosophy does far more than simply reveal the importance of social class. Marx gave a name to the mode of production developed in the modern European world: *capitalism*. Marx's unfinished *magnum opus*, the work *Das Kapital* (*Capital*), describes capitalism, particularly as it existed in late 19th-century London. *Capital* also presciently forecasts the ways the capitalist mode of production will extend over the whole world. Although some of Marx's analyses in *Capital* bear the historical marks of the era in which they were produced, the work remains salient. Philosophically, *Capital* may even be said to be a work written for and about the future, as it is much more characteristic of subsequent developments than it was of Marx's own time.

Marx's works are voluminous, although only a tiny portion of them was well known prior to Joseph Stalin's death in 1953. The political power of the movements founded under the name of Communism far overshadowed Marx himself and led to the direct suppression of some of his more philosophical or speculative works. Scholars continue to unpack Marx's legacy in the post–cold war era, an era that may allow people to see him clearly for the first time.

Many of Marx's works in addition to the *Communist Manifesto* and *Capital* are worth close study. The most important of these include *The Economic and Philosophical Manuscripts of 1844*, the *Theses on Feuerbach* (1845), *The German Ideology* (1846), *The Eighteenth Brumaire of Louis Bonaparte* (1851–1852), the *Grundrisse* (1857–1858), and the *Preface to the Contribution to the Critique of Political Economy* (1859).

Marx's work has influenced many social, political, and intellectual currents. Leszek Kolakowski's multivolume work, *Main Currents of Marxism: Its Rise, Growth, and Dissolution*, remains the best encyclopedic text documenting the various strands of Marxism.

After being expelled from the European continent as a part of the suppression that followed the revolutions of 1848, Marx lived his life from 1849 onward in London. Spending most of his days in the British Museum's Reading Room, Marx drew widely from history, economics, theology, political theory, literature, chemistry, and mathematics. In addition he had access to the new kinds of empirical studies on populations that would later be foundational in the discipline Marx himself was instrumental in crafting: sociology.

**SEE ALSO** Volume 2: *Social Class; Social Movements; Sociological Theories.*

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*Amy Wendling*

# MATE SELECTION

Almost all young men and women expect to tie the knot, but not all end up getting married according to Daniel Lichter, Deborah Roempke Graefe, and J. Brian Brown (2003). One reason some people never marry is the difficulty of finding the right person. The conventional pattern of mate selection is for men and women to choose a partner with personal characteristics similar to his or her own. Young women usually marry young men, college-educated women tend to marry college-educated men, Black women most likely marry Black men, Catholics prefer to marry Catholics, and so on. This "like marries like" phenomenon is "partly an unconscious result of a process in which many individuals attempt to achieve the best possible bargain for themselves or their children by weighing marital resources and alternatives" (Elder, 1969, p. 519). It effectively diminishes one way of achieving social mobility. Nevertheless, other factors, including shortages of marriage partners in one group and a prolonged search for marriageable partners in marriage markets, may increase the likelihood that a marriage across group lines would occur. The groups

people marry into are typically those with shorter social distance from the groups to which they belong. As a result, mate selection patterns help explain relative salience of group boundaries in a society.

## THE MARRIAGE MARKET

Social scientists view the mate selection process as analogous to the matching of employers and employees in labor markets. In labor markets, job searchers seek the best job possible, subject both to opportunities (e.g., jobs available) and constraints (e.g., their skills and credentials). Among all potential job offers, some will be acceptable to the job searcher, but others will be unacceptable, failing to meet his or her aspirations regarding work type, pay level, or work condition. Finding the best job among all possible potential job offers is both costly and time-consuming; search activities therefore do not continue indefinitely. Instead, job seekers decide on a minimally acceptable match, the so-called "reservation wage." Searchers reject job offers below the reservation wage and accept the first offer at or above the reservation wage. All else being equal, the lower the reservation wage, the more likely searchers will find a job quickly.

By analogy, in marriage markets, men and women seek the best partner possible given their own opportunities (available partners) and constraints (their own characteristics and preferences). According to Paula England and George Farkas (1986), marriage-seekers have in mind a "reservation quality partner"—analogous to the job seeker's reservation wage. Their minimally acceptable marital partners would be somebody similar to themselves. So when men and women look for the best match in marriage markets, they often end up marrying someone with similar characteristics. Those who set too high a standard for the reservation quality partner prolong the search process. Eventually, they will never marry or will have to "cast a wider net" to lower their reservation quality partner and form mismatched marriages.

## HOMOGAMY AND ENDOGAMY

Mate selection processes in marriage markets clarify why people around the world are likely to form homogamous (similar in achieved statuses, such as educational attainment) or endogamous marriages (similar in ascribed statuses, such as race/ethnicity). In traditional societies parents typically play a large role in arranging their children's marriages. The outcome is that their sons and daughters are well matched in socioeconomic status (Goode, 1982). In the United States, young men and women have free choice and prefer to marry someone they fall in love with; however, the mates that young men and women choose based on love are usually much to the liking of their parents. In American society parents no longer arrange marriages for their children—a practice still common in many less developed countries. However, thanks to socialization, American sons and daughters choose mates in the same way their parents would do on their behalf—by finding someone with common interests and backgrounds.

Individuals who are similar in age, belong to the same racial or ethnic group, have the same levels of educational attainment, come from similar family backgrounds, and/or have the same religious beliefs appear to be more "lovable" to each other because of their common interests and backgrounds. Yet an exact match on all those traits is not easy. Certain traits (religion or race) are often more important than others (educational attainment) but, over time, the relative importance of these traits can shift. In the United States, Matthijs Kalmijn (1991) noted that religious boundaries are breaking down, and interfaith marriages have become more common in recent generations. Racially endogamous marriages still are the norm, as Zhenchao Qian and Daniel Lichter (2007) pointed out, but interracial marriages are on the rise, especially among U.S.-born Americans. Meanwhile, educational boundaries have become more rigid, according to Christine Schwartz and Robert Mare (2005). In other words, compared to the past in the United States, marriages involving men and women with similar levels of education have increased whereas those involving men and women who belong to the same racial/ethnic group have declined.

Changes in racial endogamy and educational homogamy reflect changes in social structure and in the openness of American society. Social scientists such as Peter Blau and Otis Dudley Duncan (1967) have argued that, in modern, developed societies, ascriptive traits, such as family and racial background, have become less important than achieved qualities, such as education, in determining economic positions. It makes sense then that in early 21st century marriage markets men and women place more emphasis on educational attainment and less emphasis on race in choosing marriageable partners.

## INCREASES IN EDUCATIONAL HOMOGAMY

In the early decades of the 20th century, educational homogamy was high. As shown in Figure 1, in 1940, 59.3% of the husbands and wives had the same level of education. Such a high level of homogamy is not surprising; half of the married men and women had fewer than 10 years of schooling, and there was little variation in educational attainment in the population at that time. Improvements in educational attainment since then initially reduced educational homogamy—the percentage of married couples with the same level of educational

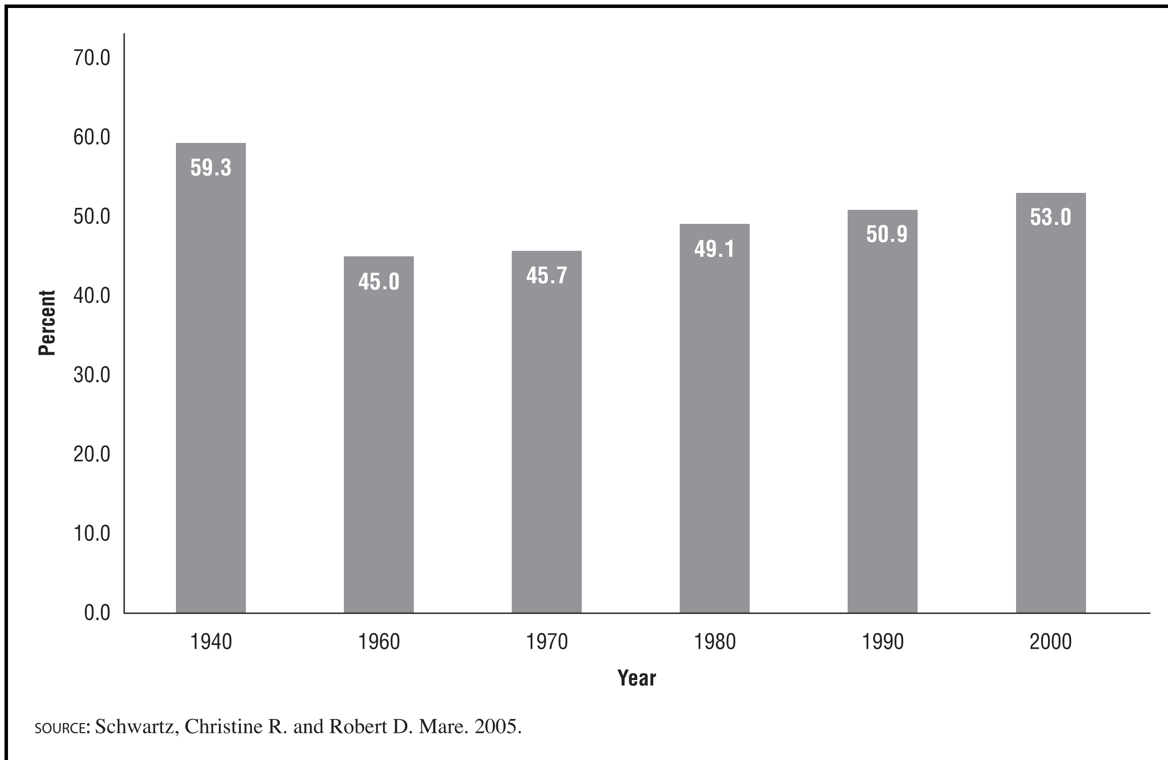


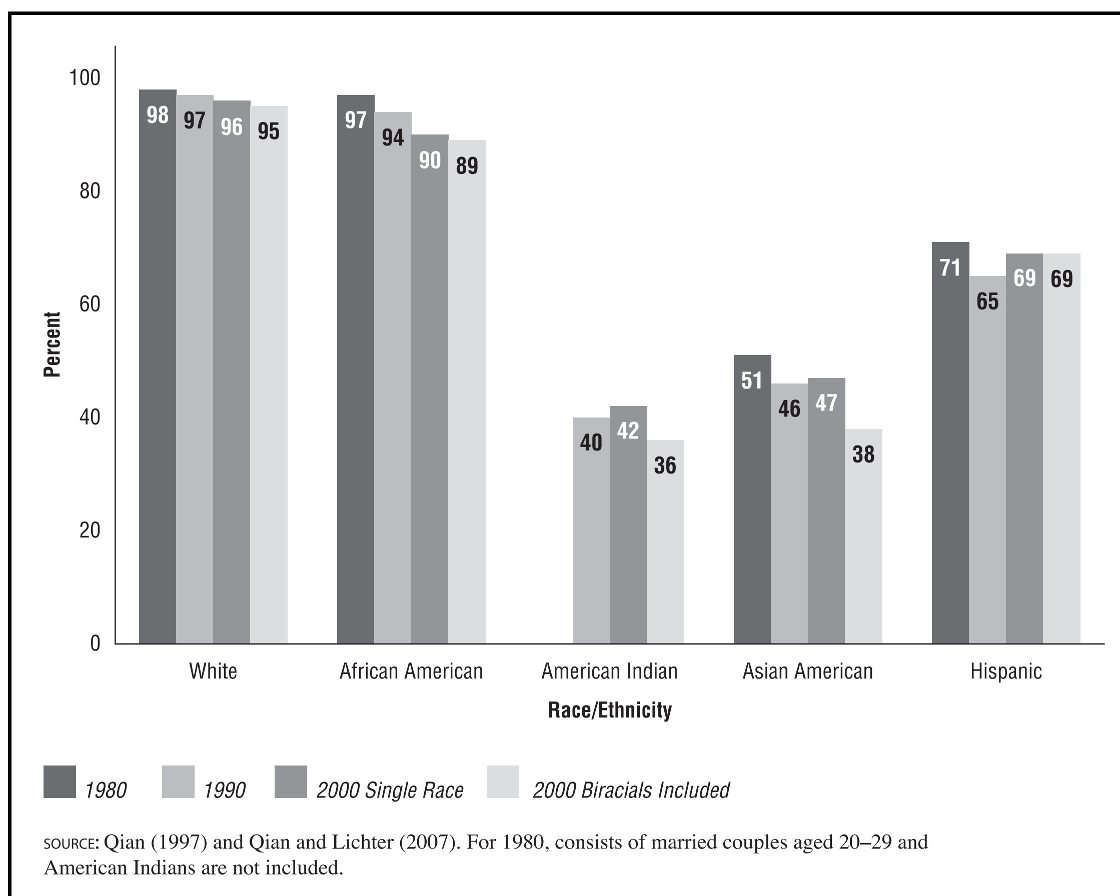

***Figure 1.*** *Percent of married couples with same levels of education, 1940–2000.* CENGAGE LEARNING, GALE.

attainment declined to 45% in 1960. At the same time, Richard Rockwell (1976) pointed out that husbands had more education than their wives in an increasing share of marriages. Gary Becker (1981) noted that marriage at that time emphasized spousal complementarity—husbands concentrated their efforts in the labor market, whereas wives specialized in domestic labor. Under these conditions, husbands' earning potentials as measured by educational attainment were more important in the marriage market than wives' educations.

The reversal in educational homogamy started in the 1970s. The percentage of couples with the same educational level increased from 45.7% in 1970 to 53% in 2000. Most of the increase in homogamy is attributable to an increase in marriages in which both the husband and wife have a college education. In large part this is because, according to Claudia Buchmann and Thomas DiPrete (2006), on average, women's educational attainment increased more than men's during this time. This increase closed the gender gap in educational attainment. More women with college educations and more women in the labor force since have moved women's socioeconomic positions upward. Responding to this change, men increasingly find women's socioeconomic resources important in marriage markets. Indeed, Megan Sweeney and Maria Cancian (2004) indicated that women's position in the labor market has become more attractive over time as a determinant of their position in the marriage market. Consequently, achieved statuses such as educational attainment have become equally important for men and women in marriage markets.

## DECLINES IN RACIAL ENDOGAMY

Levels of racial endogamy depend in part on the size of each racial group. The larger the group, the more likely group members will find marriageable partners of their own race. Thus, Whites, the largest racial group in the United States, have the highest percentage of endogamy. Endogamous marriages accounted for 98% of the White marriages in 1980 and 96% of White marriages in 2000. Endogamy, on the other hand, was much lower for American Indians and Asian Americans, which have much smaller population sizes. Statistical differences in racial/ethnic endogamy are also partly attributable to differences in the size of each group. For example, one Asian-White marriage affects the percentage of endogamous marriages much more for Asians than for Whites because the Asian population is much smaller than the White population. For the same reason, although just 4% of Whites were involved in interracial marriages in 2000, 92% of all interracial marriages include a White partner.




SOURCE: Qian (1997) and Qian and Lichter (2007). For 1980, consists of married couples aged 20–29 and American Indians are not included.

***Figure 2.*** *Percent of racially endogamous marriages among U.S. born couples aged 20–30.* CENGAGE LEARNING, GALE.

Figure 2 shows an overall decline in racial endogamy for all racial/ethnic groups, from 97% to 90% for African Americans and from 51% to 47% for Asian Americans between 1980 and 2000. The trend reversed for U.S.-born Hispanics due to a large influx of immigrants from Latin America; the increase in group size enables greater racial endogamy. Given population size differences, comparing rates of intermarriage among groups can be difficult. Statistical models can account for group size, identify the extent to which any group is marrying another more or less than one would expect given their population group size, and then reveal other factors affecting intermarriage (Qian & Lichter 2007). Results using these models show that racial endogamy among the U.S.-born has indeed declined in the past decades for each racial group.

Racial endogamy has declined for several reasons. First, increases in educational attainment among racial minorities are associated with declines in racial endogamy. College-educated men and women are more likely to marry interracially than those with less education. The fact that Asian Americans attend college at relatively high rates helps explain their low level of racial endogamy. Highly educated minority members often attend colleges, work in places, and live in neighborhoods that are integrated. They find substantial opportunities for interracial contact, friendship, romance, and marriage.

Second, the growth of the multiracial population has blurred racial boundaries and reduced racial endogamy. The U.S. Census Bureau classifies people into four major race categories: Whites, African Americans, Asian Americans, and American Indians. Hispanics can belong to any of the four racial groups but are considered as one separate minority group. In the 2000 census, Americans could choose more than one racial group for the first time. Most multiracial Americans are part White and part Black, American Indian, or Asian. When biracial Americans are included, Qian and Daniel Lichter (2007) reported, racial endogamy declines even further, especially for American Indians and Asian Americans, who have greater shares of multiracial individuals compared to African Americans.

## COHABITATION

In recent decades in the United States, educational homogamy has increased steadily whereas racial endogamy has declined. Clearly, achieved social status and

economic positions have become an important mate selection criterion whereas racial barriers have broken down to some extent. These changes also result from the fact that marriage has become more selective, as cohabitation has arisen as a viable alternative to marriage. Cohabitation can serve as a stepping stone to marriage. Debra. Blackwell and Daniel Lichter (2000) call this type of cohabitation a *winnowing process*. Educational homogamy and racial endogamy are relatively low among cohabitating couples but are much greater among those who make transitions to marriage. In other words, those who make transitions to marriage are more likely to share similar racial and educational backgrounds than those who do not.

The connection between cohabitation and marriage, however, is weakening (Cherlin 2004). Fewer cohabiting unions end in marriage. Kathryn Edin (2000) found that lack of economic resources and uncertain labor markets dampened marriage prospects for cohabiting couples. Also in 2000 Larry Bumpass and Hsien-Hen Lu indicated that a large fraction of unmarried births were to cohabiting women. This reduces the likelihood of marriage among unmarried women with children because prospective spouses may be unwilling to assume the economic and parental responsibilities associated with marriage to an unmarried mother. Thus a prior cohabitation may signal a poor "position" in the marriage market. (Qian, Lichter, & Mellott, 2005). However, cohabitation is a short-lived living arrangement. The cohabitating couples that do not make transitions to marriage often end up going their separate ways quickly.

Patterns of mate selections by race and education reflect changes in relative importance of these traits over time. Yet, they also result from increasing selectivity of marital unions—fewer people ever marry and more men and women move from one cohabitating relationship to another. Existing literature on mate selection focuses more on marriages. Future research needs to take into account men and women who are in marriage markets but have not yet formed marital unions.

**SEE ALSO** Volume 2: *Cohabitation; Dating and Romantic Relationships, Adulthood; Marriage; Remarriage.*

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***Zhenchao Qian***

## MATERNAL MORTALITY

Maternal mortality refers to death during pregnancy, childbirth, or the postpartum period (defined as 42 days following the termination of pregnancy) from causes directly or indirectly related to the pregnant state. The leading direct cause of maternal mortality globally is hemorrhage (bleeding), with the majority of these deaths occurring in the immediate postpartum period. Other leading direct causes include sepsis (severe blood infection), high blood pressure due to pregnancy, obstructed labor, and induced abortion (with most abortion-related deaths caused from hemorrhage or sepsis). Common indirect causes, which are preexisting conditions made worse by pregnancy, include HIV, malaria, and anemia. The time around delivery is by far the period of greatest

risk. Estimates suggest that two-thirds of maternal deaths occur between late pregnancy and within 48 hours after delivery (AbouZahr, 1998).

The estimated number of maternal deaths globally was 536,000 in 2005, with 99% occurring in developing countries. Nearly half of maternal deaths occur in five countries: India, Nigeria, Democratic Republic of the Congo, Afghanistan, and Ethiopia (Hill et al., 2007). The difference in the risk of maternal death between developing and developed countries is greater than that for other common health indicators. For example, the maternal mortality ratio across developed countries is 9 maternal deaths per 100,000 live births, compared to 905 per 100,000 live births in sub-Saharan Africa. Estimates of the maternal mortality ratio for individual countries range as high as 2,100 deaths per 100,000 live births (Hill et al., 2007). Viewed from a life-course perspective, maternal death represents the leading or second leading cause of death among women 15 to 49 years of age in many developing countries. The proportion of deaths due to maternal causes among females ages 15 to 49 ranges from less than 1% in developed countries to 15 to 45% in developed countries (World Health Organization, United Nations Children's Fund, & United Nations Population Fund, 2004).

Measuring maternal mortality is difficult and leads to imprecise estimates. The challenges vary by setting. Even in developed countries with well-established systems for registering births and deaths, maternal mortality has been shown to be underestimated by one-third of the actual maternal mortality ratio on average (Hill et al., 2007). This is primarily due to death certificates that do not specify the pregnant state of the woman at death. Thus, causes of death such as sepsis, embolism (blood clot), or indirect causes of death are not categorized as maternal (AbouZahr, 1998). However, only 26% of the world's population live in countries with complete death reporting via vital registration, and this drops as low as 7% and 1% in Africa and Southeast Asia, respectively (Mahapatra et al., 2007). In these countries, survey or census-based methods are used to estimate maternal deaths in the household or among siblings. Countries with no empirical data must rely on estimates from statistical models. The 2005 series of maternal mortality ratios included 61 developing countries, representing 25% of global births, for which model-based estimates were required (Hill et al., 2007).

Analysis of a time series of global maternal mortality ratios suggests only a 5.4% decrease between 1990 and 2005, with negligible change in sub-Saharan Africa (Hill et al., 2007). This stagnation is in sharp contrast to the historical experience in developed countries. In the early 20th century, maternal mortality ratios in developed countries were similar to those seen in developing countries in the early 21st century, with ratios ranging from 200 to 600 maternal deaths per 100,000 live births. Beginning around 1931, maternal mortality ratios decreased by at least 50% every 10 years over the following 50 years, stabilizing with ratios of 10 maternal deaths or less per 100,000 live births (Loudon, 1992). These declines have been attributed to the discovery of antibiotics, improved procedures for cesarean sections and blood transfusion, as well as the professionalization of midwifery care, which some authors believe explains differences in the pace and timing of the declines (De Brouwere & Van Lerberghe, 2001).

Social and economic factors related to maternal mortality have varied over time, vary currently by setting, and vary when considered at the individual versus population level. Historically, maternal mortality, unlike infant mortality, was not related to the woman's socioeconomic status. During the 19th and early 20th century in Europe and North America, for example, women delivering in a health facility were at substantially greater risk of death from sepsis than women delivering at home because of unsanitary provider practices before recognition and acceptance of germ theory.

At a global level today, although all pregnancies are at risk of obstetric complications, maternal mortality is highly concentrated among the poor. Data from developing countries show risks of maternal death up to 6 times higher for women in the poorest quintile of households relative to the wealthiest (Ronsmans, Graham, & Lancet Maternal Survival Series Steering Group, 2006). By contrast, in the United States, the risk of maternal death varies dramatically by racial and ethnic group, with African American and Hispanic women not born in the United States showing risks 4 times and 1.6 times higher than White women, respectively (Berg, Chang, Callaghan, & Whitehead, 2003). Economic status of the woman does not fully explain these differentials, however. Likewise, wealth at the national level does not fully explain differences in risks of maternal mortality, as there are 40 countries with lower maternal mortality ratios than the United States (World Health Organization et al., 2004); in addition, there are very large differences in maternal mortality at similar levels of per capita income among developing nations (Ronsmans et al., 2006).

Key areas of research regarding maternal mortality encompass clinical research and research into effective service delivery approaches. There is a substantial body of randomized clinical trials assessing the effectiveness of drugs and specific procedures (some but not all of which use risk of maternal death as an outcome), the majority of which were undertaken in developed countries (Ronsmans, Graham, & Lancet Maternal Survival Series steering group, 2006). Examples of such procedures include the use of magnesium sulfate for preeclampsia and eclampsia (a condition in pregnancy characterized by very high blood pressure), the use of

active management of the third stage of labor to prevent postpartum hemorrhage, and the use of the partograph for monitoring labor. Only one randomized population-based trial was identified in which maternal death was designed as a primary outcome; in this trial, which assessed the effectiveness of traditional birth attendants for home-based delivery in Pakistan, no significant effect on maternal death was reported (Jokhio, Winter, & Cheng, 2005).

The paucity of population-based trials for maternal death is related to the need for very large sample sizes and the difficulties associated with designing a trial that must assess multiple interventions to address the various causes of maternal death while controlling for confounding factors associated with the social determinants of maternal death, such as women's education, transport, and local infrastructure. Researchers and policy makers continue to debate the acceptability of results from quasi-experimental and other nontrial-based evaluations.

Many questions remain unanswered regarding how to reduce maternal mortality in the countries where 99% of these deaths occur, despite 20 years of advocacy, research, and program implementation by the Safe Motherhood Initiative, the international initiative dedicated to addressing maternal death. As stated above, trend data suggest little improvement in high mortality countries. It is not clear why some countries have succeeded in reducing maternal mortality, where others have not. A key question to answer is this: Where and with whom should women give birth? A systematic review suggests that the use of traditional birth attendants for home-based births has not been effective in decreasing maternal mortality (Sibley et al., 2007). However, the relationship between national rates of use of a medically skilled attendant at birth (which equates to births taking place in a health facility in the vast majority of countries) and national maternal mortality ratios is negative, although weak (Graham, Bell, & Bullough, 2001). Furthermore, although approximately 50% of developing world births report having a medically skilled attendant at birth, there are large areas of South Asia, in particular, where the percentage of births attended by a medical professional is less than 20% (United Nations Children's Fund, 2007).

The inadequate number of skilled health care workers is among the most pressing challenges facing developing countries. It has been estimated that the training of approximately 330,000 new skilled birth attendants would be required for 72% of global births to be assisted by a medical professional (World Health Organization, 2005). Thus, assuring that all births take place with a medically skilled attendant must be viewed as a long-term goal and begs the question of what the most cost-effective, context-specific interventions should be for the immediate future.

**SEE ALSO** Volume 2: *Abortion; Health Differentials/ Disparities, Adulthood;* Volume 3: *Demographic Transition Theories; Mortality.*

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# MEDIA AND TECHNOLOGY USE, ADULTHOOD

Classic mass media (television, radio, newspapers, magazines, movies, and books) and information and communication technologies (ICT) (telephones, mobile phones, and the Internet) play a central role in everyday life. Media and technology use is one of the most important leisure activities and thus accounts for a great deal of time use over the life course. In addition, media and ICT are important in shaping the life course. The technological environment is a critical part of the historical and structural contexts in which people live their lives. For example, people coming of age at the beginning of the 21st century are doing so in the so-called information society, in which mass media and ICT are much more important for individuals, organizations and companies, nations, and global society than they were in the middle of the 20th century.

This fundamental social change has altered many aspects of life; for example, ideas about the speed and frequency of interpersonal communication have been transformed by the availability of cell phones and the Internet. These technologies also are important for the messages they convey about everything from the appropriate timing of life events to the kinds of consumer goods one needs to mark those events (e.g., what new parents need to purchase). Thus, whether or not they represent reality accurately, media and ICT are a means of conveying cultural ideas about the life course and society. ICT in particular have changed the nature of social relationships over the life course in that contemporary people are embedded not only in real social networks but in virtual social networks on the Internet that may span the globe.

## THE DIGITAL DIVIDE

There are differences in access to and use of mass media and information and communication technologies (ICT) among global regions (e.g., northern hemisphere versus southern hemisphere), countries with different political systems (e.g., democracy versus autocracy), regions within countries (e.g., urban versus rural), social traits (e.g., age, income, education, and ethnicity), and individual characteristics (e.g., literacy, psychological traits). In the case of most media and technologies the ability to afford the cost of the device (television, radio, computer) or the service fee (newspapers, pay television, cinema, Internet) is a precondition for use. The term *digital divide* refers to unequal access to and use of the Internet (Norris, 2002). Therefore, the main digital divide parallels the financial divide. In addition, women in most countries are less likely to have access to the Internet and, if they have access, use it less intensely. However, in 2007 a higher percentage of U.S. women than U.S. men used the Internet (Center for the Digital Future, 2007). Access to the Internet exposes individuals to new information and enables the development of skills. Thus, unequal access to these resources may contribute to further inequalities over the life course.

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## ACCESS TO MASS MEDIA AND ICT

Access to mass media and ICT is an indispensable precondition for their use. Research shows that some subgroups of individuals are less likely to have access to these technologies. However, history shows that these access gaps usually diminish or disappear over time as a technology is diffused throughout society. For example, in European and North American societies there are few gaps in access to classic mass media; the U.S. Census estimates that more than 95% of poor households own a color television. When specific types of media are examined, gaps are apparent. Thus, even though television and radio sets are found in well over 90% of households, access gaps arise because not all content is freely available, such as cable and satellite programming. Similar differences can be observed in comparing access to free versus paid newspapers and magazines. This contrast is important because of the quality differences between free and paid media.

## MOTIVES FOR USE OF MASS MEDIA AND ICT

Research on mass media before the 1970s tended to examine the impact of media on users, viewing them as passive actors causally influenced by powerful media organizations. Beginning in the 1970s, the focus shifted to the motives underlying the use of mass media. The central research question was no longer "What do media do with their users?" but "What do users do with media?" (Rosengren, Wenner, & Palmgreen, 1985). This so-called uses and gratifications approach is still prominent in mass media research.

Researchers categorize the gratifications of using media in various ways, depending on the theoretical approach and research question. One of the most general and widely used categorization distinguishes four gratifications: cognition, affection, social interaction, and integration/habitus. Cognitive gratification refers to the need for information and learning, whereas affective gratification includes aspects such as entertainment, diversion, escapism, and excitement. Social interaction combines two kinds of interaction that are fostered by mass media. On the one hand, mass media provide topics for everyday conversations and therefore for social integration. On the other hand, electronic media such as television and radio can provide parasocial interaction. For example, people may feel personally addressed by news anchors saying "good evening" or "see you tomorrow at the same time" and feel that they are engaging in a social interaction.

The habitus gratification is based on the human need for rituals, stability, and structure. Mass media offer a reliable structure for the rhythm of days, weeks, and years. People often adjust their lives to enable or accommodate their use of media. They may take a different route to work to pick up a free newspaper or buy a magazine, align their dinnertime with the evening news, and not go out when their favorite television shows are screened; major sport events are important landmarks in the yearly calendar. Research has compared the relative importance of these motivations for types of mass media (e.g., television versus newspapers) and examined how the motivations for media use differ from those for other everyday activities (e.g., watching talk shows versus meeting friends). One of the core findings of this line of research is that television outreaches most other mass media on nearly all dimensions. Only newspapers obtain higher ranks on the cognitive function.

## PATTERNS OF MASS MEDIA AND ICT USE

In many cases the mass media are financed substantially or solely by advertisements, and the purpose of every advertisement is to reach as many people in a target group as possible. Therefore, media producers want to know in as much detail as possible how many and which people use their products. Thus, a great deal of quantitative research on patterns of media use is conducted by private companies or industry associations. An international comparative analysis showed that nearly every household in the industrialized world has a television set: Central and Eastern Europe 94.1%, Western Europe 95.3%, Japan 99.4%, United States 98.2% (IP/RTL Group, 2007). Even though access to television is widespread, viewing patterns differ significantly between countries and differ within individual countries on the basis of age, gender, race, social class, and other demographic characteristics.

| | Minutes per Day | | | | | |
|---|---|---|---|---|---|---|
| | Television[1] | | Other Media[2] | | | |
| Country | Age Group | (2006) | Newspapers | Radio | Internet | Year |
| United States | 18+ | 295 | 28 | 191 | 32 | 2001 |
| United Kingdom | 16+ | 232 | 30 | | | 2005 |
| Spain | 16+ | 228 | 13 | 110 | 27 | 2005 |
| Germany | 14+ | 227 | 28 | 221 | 73 | 2005 |
| Japan | 20+ | 213 | 27 | 94 | 71 | 2003 |
| Switzerland (Italian speakers) | 15–74 | 182 | | | | |
| Switzerland (French speakers) | 15–74 | 175 | | | | - |
| Denmark | 12+ | 160 | 19 | 188 | 18 | 2004 |
| Norway | 12+ | 156 | 46 | 133 | 30 | 2005 |
| Switzerland (German speakers) | 15–74 | 147 | 37 | 94 | 43 | 2005 |

[1]SOURCE: IP/RTL Group, 2007.
[2]SOURCE: World Association of Newspapers, 2006.

***Table 1.*** *TV, newspaper, radio and internet use in selected countries.* CENGAGE LEARNING, GALE.

Table 1 shows the average number of minutes per individual per working day spent viewing TV in selected industrialized nations. People in the United States spend the most time watching television; Americans spend twice as many minutes per day as do people in the German-speaking part of Switzerland, who spend the least amount of time. Especially in Europe, television use and newspaper reading are inversely related (both on the individual and national level). Whereas newspapers are read widely in middle and Northern Europe (e.g., Switzerland, Germany, Norway), television is the major mass medium in Southern Europe (e.g., Spain).

It is difficult for researchers to make direct comparisons of time spent using specific media because inconsistent measures and operationalizations are used across media types and across contexts. Whereas television use is measured with devices attached to the television set and is therefore reliable, reading time usually is measured by self-reports, which are less reliable. Cultural influences on media use are apparent in Table 1, which shows that the three different language regions of Switzerland have different levels of television viewing. Viewing patterns also vary by cultural and national context. For example, Figure 1 shows the percentage of the audience that watches television throughout the day in Denmark, Japan, and Spain. In Denmark viewing levels are low during the day; the 30% point is reached only with the evening news at

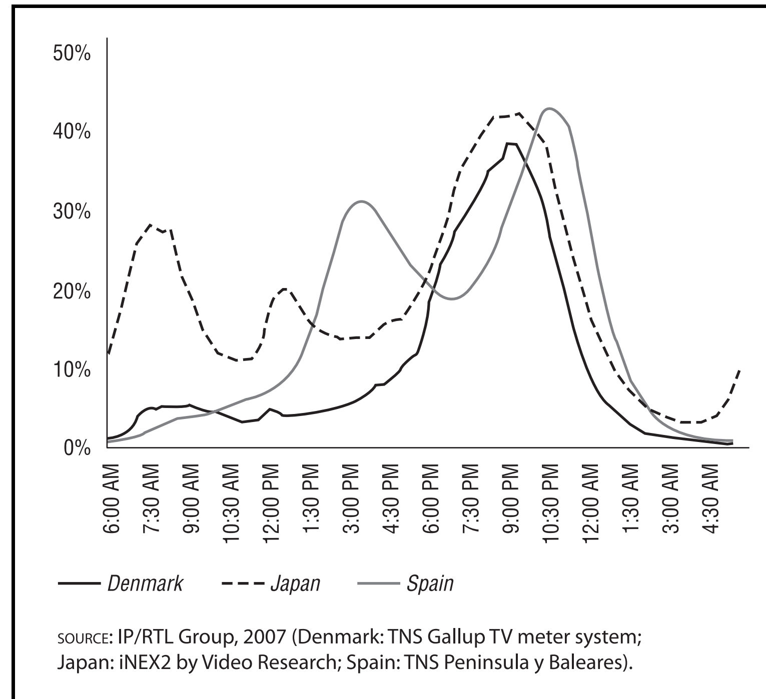


***Figure 1.*** *Daytime TV viewing pattern of selected countries. Percent of population watching television at a particular time on a week day.* CENGAGE LEARNING, GALE.

7:30 P.M. Japan reaches a first peak of 29% audience viewing in the early morning. In Spain there is a clear siesta peak in the late afternoon and a much later prime-time peak, and at midnight 30% of the audience still has the televison on; in contrast, that share is only 10% in Denmark.

Researchers have noted that use of media during recreational time has reached a saturation level; that is, usage rates have reached a ceiling and cannot increase much more. Thus, use of new media devices such as the Internet leads to a reduction in time spent using other media or to a pattern of parallel use: The radio and television are on while people surf the Internet, read a magazine, or do non-media-related activities.

## EFFECTS OF MASS MEDIA AND ICT USE

Researchers have long been interested in the effects of mass media use on individuals, social groups, and societies; that interest has extended to ICT. Contemporary research questions cover issues related to entertainment (e.g., "Does violent and pornographic content in movies affect real-life behavior?") as well as news (e.g., "Does the press influence political opinions?") and interpersonal communication devices (e.g., "Are social networks affected by the Internet?").

The most influential theoretical approaches in this field are agenda setting, framing, and cultivation. The agenda setting perspective assumes that mass media do not have a strong influence on what people think but are effective in influencing what people think about. Thus, whether an issue is perceived as important by the public is not just a result of its true importance. Instead, people's perceptions are biased by the mass media, and issues are perceived as more important when they are covered extensively by the media. The framing approach is related to this perspective and can be treated as second-level agenda setting. The media are assumed to influence people by telling them how to think about a certain topic. The same topic can, for example, be framed as an economic, moral/ethical, technical, or conflict issue. Empirical research shows that there are often situations in which these agenda setting and framing effects of mass media can be observed. However the influence of mass media is far away from deterministic and reverse effects in which the public sets the media agenda are observed as well.

Whereas agenda setting and framing refer more to the short-term and medium-term effects of media on users, the cultivation approach studies longer-term effects. In the 1970s George Gerbner and associates coined the term *cultivation approach* to refer to the finding that mass media use evokes a biased perception of the real world by establishing distorted stereotypes (Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002). Research in this area focused initially on violence but later was applied to

gender, minority, age roles, family, and other topics. Findings show that heavy users of television have a more biased perception of the real world. For example, those viewers have a disproportionately high estimate of the number of criminals, police officers, medical doctors, and lawyers in the population because of the overrepresentation of those occupations on television (Gerbner et al., 2002).

In addition to these three approaches there is a more sociologically oriented approach that focuses on the effects of mass media and ICT on social relationships. This perspective emerged in the 1980s and 1990s from concern that heavy use of television and computers would lead to social isolation. As a result of the widespread use of the Internet and its possible interactive use (e.g., instant messaging enables communication between people), the question was reformulated as whether ICT use leads to a shift from offline to online relationships or whether increases in the size of a person's social network facilitate the creation of new relationships and the maintenance of distant relationships. Online communities are often related to hobbies or professions but are used only by a minority (15%) of U.S. Internet users (Center for the Digital Future, 2008). However, among U.S. users who are members of an online community, 43% say that "they feel as strongly about their virtual communities as they do about their real world communities" (Center for the Digital Future, 2007, p. 1). A survey in the United Kingdom showed that students are most likely to make online friends (42%) but that the employed and the retired are more likely to meet those new friends offline (Dutton & Helsper, 2007).

### FUTURE RESEARCH

Research linking media, ICT, and the life course is relatively limited because the concept of the life course is not widely known in communication science, and life course research incorporating media and technology use is extremely limited. In light of the increasing importance of ICT and the enduring importance of mass media, an integration of these fields seems overdue. The shortcomings of existing research on media and technology use with regard to the life course lie primarily in their regional focus and their segregation in different scientific disciplines. Cross-national comparative research is very limited because of different research traditions, settings, and methods. Furthermore, research on media and ICT use is biased by the interests of applied research and the focus on target groups of economic relevance.

**SEE ALSO** Volume 2: *Cultural Images, Adulthood; Leisure and Travel, Adulthood; Time Use, Adulthood.*

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***Thomas N. Friemel***

## MENOPAUSE

Menopause can be defined as an event, a transition, and a set of stages. As an event menopause is marked by the last menstrual period in a woman's lifetime. Unlike other events, such as a birthday, menopause as a definitive event can be defined only retrospectively. Menopause also represents a transition from menstruating episodically (having periods) to the permanent absence of menstrual cycling. As a transition or passage from one stage of life to another, menopause can be quick, straightforward, easy, and uncomplicated or protracted and disruptive. Although physiologically most women enter a postreproductive, postmenstrual phase of life, societies and cultures assign additional and variable meanings to that phase.

Menopause has been scientifically, though equivocally, demarcated as a set of stages through which women progress. Premenopause is the stage in which most adult women experience regular menstrual cycles. Perimenopause, during which a woman experiences significant changes in menstruation, is characterized by changes in cycle length and the intensity of menstrual bleeding. Postmenopause is the postmenstrual and postreproductive stage. The perimenopausal stage also is referred to as the climacteric and is associated most closely with "the menopause" or, more euphemistically, "the change." Along with unpredictable menstrual bleeding, underlying changes in a perimenopausal woman's

endocrine system contribute to hot flashes, a sudden, intense sensation in the face, neck, or upper body of overheating and sweating. Those symptoms can be a potential source of personal discomfort and social embarrassment. A similar vasomotor symptom (a symptom related to the constriction or dilation of blood vessels) that is attributable to perimenopause, night sweating, is essentially a hot flash that occurs while a person is asleep, often disturbing that person's sleep.

Although menopause can be thought of as a strictly biological phenomenon, it has been culturally imbued with meanings related to associated roles and statuses in women's lives. For example, menopause often is viewed as a marker of aging: Old (i.e., older) women are menopausal. Without social or technological interventions, menopause represents the end of reproduction and the role of a new mother. Although "no more periods" can represent freedom from a periodic persona problem, it also can represent a loss of youthful sexual and reproductive desirability. Both popular and scientific descriptions of menopause are notable for their reliance on analogies to loss, wear, and trouble. These negative connotations coupled with endocrine changes, unpredictable and disruptive bodily sensations (irregular bleeding, hot flashes, and night sweats), and interrupted sleep patterns may contribute to an altered self-concept and depressed psychological well-being among some perimenopausal women.

The solidification of a so-called menopause industry (Coney, 1994) during the 1990s can be regarded as a life course case study of the intersection of age, cohort, and historical time within particular sociocultural contexts. Women born in the post–World War II baby boom entered their mid-forties and early fifties during that period, which coincided with the growth of research on the health of women in midlife. For example, the Office of Research on Women of the U.S. National Institutes of Health, which funded the Women's Health Initiative, was founded in 1990. Public discourse on menopause expanded during the 1990s as well. Particularly focused on the self-help arena, book publication on the change proliferated during that period. Influential books such as Germaine Greer's (1991) *The Change* and Gail Sheehy's (1992) *The Silent Passage* heralded a new area of publishing, including positive approaches; menopause diets; exercise plans; advice books from women physicians and feminist activists; source books and guides for women, for men/husbands, and "for dummies" or "complete idiots"; and a pop-up book. By 2001 *menopause* had become the title of a musical.

## EVOLUTIONARY, CLINICAL, AND BIOMEDICAL PERSPECTIVES

A broad bioevolutionary perspective considers whether menopause serves an adaptive purpose. The grandmother hypothesis attempts to explain why, relative to most other mammals, the human female reproductive period ends early in the life span. Prehistoric grandmothers provided assistance to their daughters and their progeny once the grandmothers completed bearing and raising their own children. Thus, grandmothers could invest in the survival of their offspring.

From a clinical vantage point, menopause is inherently pathological and women experiencing menstrual changes are in a diseased or prediseased state. Menopause is defined as functionless or dysfunctional. For example, in the International Classification of Diseases of the World Health Organization, menopause is coded and discussed medically as ovarian failure. In medical textbooks the menopausal stages are portrayed with reference to chronic degenerative diseases such as cardiovascular diseases. A typical analogy is made between menopause and diabetes as hormone deficiency diseases of estrogen and insulin, respectively. Thus, the problem of menopause necessitates medical treatment with estrogen therapies. Hormone therapy—previously termed hormone replacement therapy—includes estrogen medication taken on a continual or daily basis, often combined with progestin. These therapies are prescribed to treat short-term menopausal symptoms such as hot flashes and, more controversially, long-term chronic diseases such as osteoporosis and heart disease. However, estrogen-based hormone therapy is not the only clinically available therapeutic option. Irregular and heavy bleeding associated with the climacteric is addressed medically through hysterectomy. Sexual difficulties among menopausal patients sometimes are treated with estrogen or testosterone. Some depressed and sleep-disturbed patients receive hormone therapy or a variety of psychiatric medications.

Biomedical perspectives are supported in part by empirical findings that the timing of menopause is related to overall health (early menopause may be influenced by poor health practices and can be a marker for subsequent ill health) and longevity (later ages of menopause are positively correlated with longevity). Biomedical research on menopause tends to be conducted on patient populations rather than random samples drawn from the community, and so these perspectives emphasize therapeutic intervention to alleviate the troubles of discomfited patients. However, menopausal patients are not representative generally of menopausal women. Population-based studies of midlife women, by contrast, generally show lower levels of menopause-related sickness and find little evidence for a menopausal syndrome that includes symptoms beyond hot flashes and night sweats (Avis et al., 2001; Rossi, 2004).

## FEMINIST AND SOCIAL SCIENTIFIC PERSPECTIVES

Feminist perspectives tend to categorize the medicalization of menopause as a way for the institute of medicine

to regulate (Martin, 1987; Zita, 1993). Social scientific perspectives on menopause focus on attitudes and laypersons' understandings of what menopause is and how different women (and men) experience it. Research insights from these perspectives emphasize the diversity of menopause across different sociocultural contexts. For example, anthropological studies document the divergent cultural definitions and consequences of menopause in different countries and geographic regions (Seviert, 2006). Margaret Lock (1993) contrasted the aches, pains, and poor eyesight that tend to characterize the change of life (*konenki*) in Japan to the hot flashes and night sweats considered typical of menopause in North America. Within societies, attitudes toward menstruation influence women's experiences of menopause (Bowles, 1992; Papini, Intrieri, & Goodwin, 2002). Extensive life history data from women enrolled in the Tremin Research Program on Women's Health have helped document many aspects of women's menstrual and menopausal lives, including women's concerns about maintaining self-control and limiting social disclosure during potentially disruptive symptoms and behaviors (Kittell, Mansfield, & Voda, 1998). Applying a biopsychosocial framework to a national study, Alice Rossi (2004) found that somatic amplification—awareness of and sensitivity to one's private bodily functions—influences women's and men's reports of symptoms that often are labeled as menopausal.

## RESEARCH DEBATES ON HORMONE THERAPIES

Estrogen, which can help prevent hot flashes, is the most widely used treatment for menopause and, arguably, feminine aging (MacPherson, 1993; McCrea, 1983; Voda & Ashton, 2006). In the 1960s the gynecologist Robert Wilson (1966) advocated estrogen supplementation to help aging women look young and be *Feminine Forever*. By the early 1980s solo estrogen therapy was known to cause uterine cancer. Since that time menopausal hormone therapies for women with intact uteri have combined estrogen with progestin, and during the 1990s those noncontraceptive hormones were prescribed widely for midlife American women. Pharmaceutical companies developed an array of hormone delivery methods, including patches, topical creams, vaginal rings, and low-dose pills. Although those regimes were approved for short-term relief of menopausal symptoms, there was no evidence of long-term benefits. Observational epidemiologic studies found that women who used hormone therapy were healthier and lived longer than other women, but was this because hormones caused better health or because healthier women chose to use hormones (Matthews, Kuller, Wing, Meilahn, & Plantinga, 1996)?

In 1993 the Women's Health Initiative (WHI) was funded to help provide definitive evidence on the relationship between hormone therapies and cardiovascular diseases by enrolling thousands of perimenopausal and postmenopausal women in randomized clinical trials. In 2002, three years before the planned conclusion, the combination hormone therapy component of the WHI was halted when unexpected adverse outcomes were detected. Hormonal treatments increased women's risk of heart attack, stroke, blood clots to the lung, and invasive breast cancer (Rossouw et al., 2002; Voda & Aston, 2006). As a consequence of the WHI, many women stopped taking hormones, contributing to a lower incidence of breast cancer caused by estrogen-sensitive tumors (Ravdin et al., 2007). Some skeptics of the WHI results (Grodstein, Manson, & Stampfer, 2006) advanced a new hypothesis based on the timing of prevention: Hormones benefit only women who start therapy early, and the WHI trials enrolled women who were too old and began hormone therapy too late.

## IMPORTANCE TO LIFE COURSE RESEARCH

Research on menopause fits well within life course perspectives. The timing of menopause and cross-cultural menopausal attitudes, beliefs, and practices are important areas of life course studies. In light of the personal and social dimensions of menopause, life course trajectories related to gender, family, and employment may be confounded with menopausal dynamics. The dominant life course model of menopause frames it primarily as an age-related process. Although the sociocultural contexts of menopause have been studied widely, other time dimensions, such as cohort and history, also should be considered within an explicit life course framework.

**SEE ALSO** Volume 2: *Infertility; Midlife Crisis and Transitions; Sexual Activity, Adulthood;* Volume 3: *Aging; Rossi, Alice.*

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# MENTAL HEALTH, ADULTHOOD

Mental health is a dynamic process that changes over the life course. Although childhood mental health influences mental health during adulthood, mental health in adulthood is also influenced by contextual and historical factors. As people move through the life course, changes in economic circumstances, social roles, social integration, social networks, and personal aspirations affect their mental health trajectories. General social trends such as a globalizing economy, changing marriage and divorce rates, and women entering the work force in increasing numbers as well as historical events, including wars, economic depressions, or terrorist attacks, also can affect adult mental health. The impact of these trends and events varies by the age at which people experience them. Historical and generational trends also affect attitudes toward using mental health services, taking psychotropic medications, and the stigma of mental illness. These processes ensure that mental health is a dynamic rather than static object of study across the life course.

## DEFINITIONS OF MENTAL HEALTH AND THEIR RELATION TO THE LIFE COURSE

*Mental health* has a variety of meanings. On its face, it refers to a general feeling of well-being and an absence of mental health difficulties. Researchers and therapists, however, usually use the term in exactly the opposite sense: the presence of mental health *problems* or mental *illness*. Because mental health is now associated with poor mental health, this is the term that will be used in this chapter.

The initial studies of mental health in the community in the 1950s and 1960s used broad measures that had several characteristics (Langner, 1962). First, they did not distinguish types of disorders, even among those that were viewed as distinct. Instead, they contained a variety of symptoms characteristic of general depressive, anxious, and psychosomatic conditions. Scales combined symptoms of anxiety (e.g., restlessness, nervousness, heart beating hard), depression (e.g., low spirits, feeling apart, nothing seems worthwhile) and various psychosomatic symptoms (e.g., pains in the head, cold sweats, acid stomach). Second, they did not make a sharp distinction between healthy and disordered conditions but viewed mental health as a continuum that moved from mild, to moderate, to severe conditions. Third, they asked about general symptoms such as "do you ever have trouble sleeping," "do you have difficulties in concentrating," or "do you ever feel lonely" that were common in nonclinical community samples. Because they emphasized such ordinary problems, researchers found that the vast majority of respondents reported some mental health problem. Indeed, those who reported no symptoms were the exception rather than the rule in these studies.

General and continuous symptom scales, however, have several weaknesses for the study of mental health.

One is that they do not measure serious mental disorders, which are highly stigmatizing and associated with tremendous suffering, limited role performance, and decreased life chances. A second limitation is that these general measures are not congruent with the discrete conditions that have been the focus of mental health professionals since the development of the *American Psychiatric Association's Diagnostic and Statistical Manual* (*DSM*) in 1980. Since that time, the mental health professions have focused on distinct mental disorders such as major depressive disorder, obsessive-compulsive disorder, posttraumatic stress disorder, and phobias, among many others. Finally, mental health policy is most concerned with serious and persistent mental disorders, not the conditions of generalized distress measured by continuous symptom scales. Although general scales of distress are very useful for uncovering the benefits and flaws of social conditions, they have not proven to be very useful for mental health policy making.

This review provides a general overview of depression, anxiety, phobias (a class of anxiety disorders), and anger during adulthood, as well as the treatment of these conditions. It pays special attention to age differences, changes over the life course, and changes over time in each condition. Full knowledge about how mental health varies across the life course requires long-term prospective studies across many different age cohorts. Because such studies are not available, much of our knowledge about mental health over the life course is provisional and subject to error. This review also discusses some of the major problems that studies of mental health over the life course confront and some of the implications of their findings for public policy.

## DEPRESSION

Depression is the single most common diagnosis in psychiatric treatment and one of the most common disorders in the population. It involves states of sad mood, diminished pleasure, sleep and appetite difficulties, fatigue, lack of concentration, feelings of worthlessness, and thoughts of death. Studies in the United States estimate that about 16% of people suffer from major depressive disorder over their lifetime and about 7% have experienced the disorder during the past year (Kessler, Berglund, et al., 2005; Kessler, Chiu, Demler, & Walters, 2005). Major depression disorder is the central disorder in the broader category of mood disorders, which also include bipolar disorder, a serious condition that features mood swings between elation and deep depression, and dysthymia, which features milder but very persistent symptoms of sad mood.

Rates of depression generally decline as people get older. People in their late teens and early twenties consistently report the highest levels of depression. Some studies indicate that middle-age people have the lowest levels of depression whereas other researchers have found that groups including participants 60 years old or older reported the lowest amounts (George, 2007). These patterns seem to be primarily due to the relationship of age and changing economic status: Young people have the lowest and least stable levels of income, and income in turn is a well-documented correlate of depression. In addition to economic well-being, changing patterns of interpersonal relationships, physical health problems, and discrepancies between aspirations and accomplishments also partially account for age differences in depression. The relationship between age and depression also changes across different generations. For example, growing economic security among recent cohorts of the elderly has improved their mental health status relative to other age cohorts.

Experiences in childhood and adolescence have strong effects on mental health at later stages of the life course. Traumatic childhood experiences such as parental abuse or neglect that lead to a lifelong sense of helplessness and other negative cognitive states often make people prone to develop depressive symptoms as adults (Seligman, 1975). Most studies also show adverse effects of parental divorce, especially when it occurs very early in a child's life, on later rates of depression, although the impact of parental divorce on adult mental health might be declining as divorce becomes more common (Cherlin, Chase-Lansdale, & McRae, 1998). Other studies show that socioeconomic conditions during childhood, especially prolonged states of poverty, are associated with depression during adulthood (McLeod & Shanahan, 1996).

Although early experiences do influence later mental health, they do not determine it, because social changes during adulthood alter life trajectories. For example, finding parental substitutes can mitigate the impact of early parental divorce or death (Brown & Harris, 1978). Likewise, the adverse influence of poor economic circumstances on depression during childhood can be overcome through occupational and educational attainment later in life. In addition, childhood is not the only stage of the life course that influences mental health during later periods. Deborah Carr's (1997) research showed that the occupational aspirations women held during their early 30s influenced their levels of depression when these women entered their middle 50s. Those women who did not meet their earlier aspirations had more distress and less purpose in life than women who achieved the goals they set earlier in life. These processes are also tied to historical contexts. Women who are members of birth cohorts that did not value or have opportunities for achievement outside the home were more content with their statuses as homemakers; conversely, younger cohorts of women were more likely to value pursuing careers and so may be more disappointed when they do not realize their expectations.

The importance of generational differences holds more generally. For example, marriage is especially beneficial and marital loss especially harmful for depression during historical periods when beliefs about the permanence, desirability, and importance of marriage are culturally strong and pervasive (R. W. Simon & Marcussen, 1999). Another example is that having a spouse die is more detrimental to levels of depression among recent cohorts of retired men than women (Umberson, Wortman, & Kessler, 1992). This could stem from the high value these men placed on occupational achievement so that widowhood symbolizes loneliness and the inability to manage daily affairs to them. Conversely, widowhood provides new opportunities for self-sufficiency for older women from the same cohorts.

Several other demographic and social factors are consistently associated with the likelihood of depression. Levels of depression among women are significantly higher than among men, usually about twice as much. This could be because women are more likely to be exposed to the kinds of stressful experiences that are associated with depression, including role overload because of conflicting demands from work and family obligations, and social and economic inequality. These stressors are themselves linked to gender role expectations in particular historical contexts and are not invariant. Alternatively, women might express their distress in forms such as depression whereas men react to similar stressors through substance abuse or violence. The expression of distress also varies across generations and historical periods.

Socioeconomic circumstances also have a consistent relationship with depression among adults. Adults with low incomes, who live in physically and socially hazardous environments, who are unemployed, and who are not well educated have higher levels of depression than individuals who have more resources (Eaton & Mutaner, 1999). The lasting impact of socioeconomic circumstances, however, is influenced by historical context. Glen Elder's classic study, *Children of the Great Depression* (1974), indicated that children who experienced childhood and adolescence during the stressful and economically deprived circumstances of the 1930s suffered adverse mental health effects as adults. However, the experience of the Great Depression did not have a lasting negative impact on the mental health of a somewhat older group in their 20s during this period. Elder's work indicates that the developmental impact of historical events depends on the age when they occur in a person's life.

Another consistent finding is that social and emotional attachments to other people are associated with low levels of depression whereas their absence is related to high levels. For example, married people report less depression than unmarried people (Umberson & Williams, 1999). This stems from several factors: Married people receive more social support, have stronger ties to community institutions, and display healthier and less risky behaviors. Conversely, divorced and separated people and, to a lesser extent, unmarried and widowed people report more depression. In contrast, ethnicity is one characteristic that does not seem to be associated with depression. Studies report inconsistent relationships between ethnicity and depression but, overall, do not indicate that any ethnic or racial groups are particularly likely or unlikely to become depressed.

Numerous theories have been proposed for why some people but not others become depressed, although no theory has yet been proven. Many studies associate depression with particular clusters of genes; however, it has not been confirmed that genetic dysfunctions cause depressive disorders. Other studies find that people with depression have smaller hippocampuses, a region of the brain that affects memory processes, although it is just as likely that depression itself or the medications that are used to treat it cause differences in brain size instead of the opposite (Sapolsky, 2001). Another popular biologic explanation of depression is the kindling hypothesis, which posits that social stressors trigger first episodes of depression but that stressful events are decreasingly likely to trigger future episodes, which are more likely to arise because of biologic vulnerabilities (Post, 1992). Although genetic and biologic studies have dominated recent research, consensus is growing that no single type of factor, whether genetic, biologic, psychological, or social, can solely cause depression (Kendler, 2005). Instead, researchers increasingly recognize that biopsychosocial explanations emphasizing the interactions between different levels of explanation offer the most adequate causal explanations for this condition.

Finally, rates of depression vary enormously across cultural contexts. One set of studies shows that rates of depression vary from a low of 3% of women in a Basque-speaking rural area of Spain to a high of over 30% of women in an urban township in Zimbabwe in East Africa (Brown, 2002). These disparate rates are directly related to the different numbers of severe losses suffered by people in these countries. Another summary of community surveys in 10 countries found lifetime prevalence rates that ranged from a low of 1.5% in Taiwan and 2.9% in Korea to a high of 16% in Paris and 19% in Beirut in Lebanon (Weissman et al., 1996). A third study found that rates of depression vary by a factor of 15 among primary medical care patients in 14 different countries (G. E. Simon, Goldberg, Von Korff, & Ustun., 2002). These diverse rates could be due to differences in the rates of social stressors leading to depression across cultures, diverse expressions of depression in different cultures, or methodological difficulties in using instruments that are not sensitive to cultural contexts. To the extent that these huge differences in prevalence across

cultures are real and not the product of methodological artifacts, they suggest that the early 21st century focus on unraveling the genetic correlates of depression might be misplaced and that more attention should be paid to societal impacts on the development of depression.

## ANXIETY

Anxiety disorders involve psychological feelings of worry, nervous tension, foreboding, threat, and alarm; behavioral manifestations such as hyperalertness and excitement; and somatic changes, including increased muscular tension, heart palpitations, difficulties breathing, raised blood pressure, and heavy sweating. Unlike the mood disorders, in which major depressive disorder is clearly the central condition, anxiety disorders are divided into a number of different types (although all generally share the somatic symptoms already mentioned). These include panic disorders that involve sudden and inexplicable episodes in which people lose control of their emotions and often have thoughts of dying (Barlow, 1988); obsessive-compulsive disorders, which feature intrusive, inappropriate, and recurrent thoughts and behaviors; posttraumatic stress disorders, in which the experience of an extreme stressor causes people to experience recurring symptoms of numbing, avoidance, and increased arousal; generalized anxiety disorders with excessive and persistent worries; and phobias, or intense fears of particular objects or situations, which is discussed in the next section.

In contrast to depression, which involves feelings of lethargy, inactivity, and hopelessness, fear and anxiety states are marked by tension, arousal, and alertness. Although depression usually concerns past losses of a love object, important resource, or valued goal, anxiety is directed toward some future threat or danger. Symptoms of anxiety can be normal if they arise in dangerous situations; anxiety disorders exist when people become seriously anxious when they do not face a dangerous situation or their symptoms are disproportionately severe or prolonged relative to their cause.

As a group, anxiety disorders are the most commonly occurring type of mental disorder. Some studies have shown that slightly more than 18% of the American population had experienced an anxiety disorder over the past year and nearly 30% at some point in their lives (Kessler, Berglund, et al., 2005; Kessler, Chiu, et al., 2005). Specific and social phobias are by far the most commonly occurring anxiety disorders, followed by posttraumatic stress disorder, generalized anxiety disorder, separation anxiety disorder, and panic disorder.

As with depression, age and rates of anxiety disorders are inversely related: People over 60 years of age report substantially less anxiety over their lifetimes than those who are younger. The reported age of onset (or first occurrence) for most anxiety disorders is usually during childhood and adolescence, earlier than for depressive disorders. Most people who experience an anxiety disorder at some point in their life report having had their first episode by age 15.

The social correlates of anxiety disorders are comparable with those for depression: being female, unmarried, and of low socioeconomic status, although the relationship of socioeconomic status and anxiety disorders is often not as clear as is the case for depression. Most people who have anxiety disorders also have family members with histories of mental disorder. Most research, however, indicates that little specificity exists in family history: Family members of an affected individual are likely to have some sort of anxiety, mood, or substance use disorder but not necessarily the particular type of disorder that the individual has.

Some researchers have suggested that the social triggers of anxiety and depression are distinct (Finlay-Jones & Brown, 1981). In particular, stressful life events that involve fear generate anxiety whereas events that feature the loss of some valued resource trigger depression. Other scholars, however, suggest that anxiety and depression reflect the same biologic vulnerability to overreactive responses to stressful life events of all kinds (Barlow, 1988). A difficulty in testing these competing explanations is that most major stressful life events involve both fear and loss, so it is difficult to separate these two components. For example, marital dissolution often involves the loss of a valued relationship, but it also may create uncertainties about finances, relationships, children, living conditions, and so on. Few life events solely involve fear or loss, and they typically generate both anxiety and depression.

## PHOBIAS

Phobias are a class of anxiety disorders that involve such strong fears of specific objects or situations that people become extremely uncomfortable and even try to avoid the cause of the fears. The two major subtypes of phobias are simple phobias, which involve specific fears such as snakes (ophidiophobia), spiders (arachnophobia), or heights (acrophobia), and social phobias, which feature extreme anxiety and avoidance of situations in which people are exposed to the scrutiny of others, such as when they must speak in public. The sorts of things that most people are phobic about are not the things that are actually most dangerous in modern life, such as automobiles, guns, or electrical outlets. Instead, people seem to be predisposed to fear the sorts of things that were dangerous many thousands of years ago when the human genome was being formed, such as animals, darkness, strange places, and heights.

Phobias are the most commonly occurring specific mental disorder. At any particular time, about 9% of the U.S. population reports having had symptoms of a specific phobia, about 7% of social phobia, and about 3% of agoraphobia (a debilitating and causeless condition that makes those afflicted afraid to leave the home or, in a more general sense, any wider area that does not provide a sense of comfort and ease) in the past year (Kessler, Berglund, et al., 2005). About 13% reports lifetime experiences of some specific phobia, about 12% of social phobia, and about 7% of agoraphobia. The correlates of phobias (e.g., childhood experiences of physical and sexual abuse, parental history of mental disorders, female gender) are comparable with the predictors of other anxiety disorders.

Social phobia has been the subject of intense debates over whether it represents a true disorder or a variant of the normal personality trait of shyness. Social phobia was not even mentioned in psychiatric diagnostic manuals until 1980. When it appeared for the first time, the manual noted that "The disorder is apparently relatively rare" (American Psychiatric Association, 1980, p. 228). Studies of the disorder before 1980 indicated that only about 1 to 2% of the population reported this condition. Yet, more recent studies find that 12% experience social phobia at some point in their lives and about 40% of people report at least one of six social fears, the most common being fear of public speaking (Kessler, Stein, & Berglund, 1998).

Very small changes in the wording used to measure social phobias account for their huge increase. For example, changing the wording of questions that ask about fears of public speaking from having extreme distress when "speaking in front of a group you know" to "speaking in front of a group" doubled the number of positive responses. Likewise, changing the criteria from have "a compelling desire to avoid" fear-inducing situations to having "marked distress" in these situations resulted in a sharp increase in the reported amount of social phobia. The result was that the percentage of the American population with a lifetime experience of social phobia increased from 2% to 3% to 13.3%, a nearly six-fold increase, and has remained at comparably high levels since.

Critics suggest that the extreme growth in rates of social phobia after survey researchers make only minor changes in wording indicates that surveys might create rather than reflect these conditions (Horwitz, 2001). Others note the influence of pharmaceutical companies in defining the normal personality trait of shyness as a mental disorder to increase sales of their products (Lane, 2007). Many of the *symptoms* of social phobia such as apprehension about speaking in public seem to be normal fears and not mental disorders.

In contrast, advocates of viewing social phobia as a true mental disorder cite the distress, hindered educational and occupational performance, and greater levels of substance abuse among people with social phobia (Kessler et al., 1998). They also note that people with social phobia do not prefer to avoid others but intensely desire to have normal social interactions. They are unable to control their fears and so find certain sorts of social interactions intensely uncomfortable. The controversy over the pathology or normality of the symptoms of social phobia illustrates the difficulty of separating ordinary distress from mental disorder.

## ANGER

Unlike the vast literature regarding depression, anxiety, and phobia, anger is relatively understudied. It refers to feelings ranging from frustration, irritation, and annoyance to fury and rage. It can remain unexpressed, be manifest verbally, or result in behavioral aggression and violence. Anger is intensely social because it is typically directed at other people or social situations. Often, these feelings involve some sort of perceived unfairness between angry people and the target of their anger

Although the *DSM* defines intermittent explosive disorder (IED), this diagnosis has received far less attention than other common mental health conditions. The *DSM* criteria require several discrete episodes involving failure to resist aggressive impulses that lead to serious assaultive acts or property destruction and are disproportionate to a precipitating psychosocial stressor. The first large population survey that measured the prevalence of IED found that more than 5% of respondents qualified for this diagnosis (Kessler et al., 2006). People seem to get less angry as they grow older: Anger is greatest among young adults, declines in midlife, and is lowest among the elderly. Lifetime prevalence of IED was inversely associated with age so that patients ages 18 to 29, 30 to 44, 45 to 59, and over 60 reported declining levels of 7.4%, 5.7%, 4.9%, and 1.9%, respectively. Although the reasons for this are not clear, it is possible that as people age they become more settled and tolerant of situations that produce anger among younger people, or they simply face fewer situations that they regard as unfair.

Because anger is inherently social, it is related to intense interaction with other people (Schieman, 2006). Parents report more anger than the childless, and people who live alone are less angry than those who live with others. Unlike depression and anxiety, which are primarily disorders of girls and women, most people with anger-related disorders are male. It is not yet clear whether the male predominance in anger disorders reflects biologic and psychological predispositions or cultural expression rules that are more tolerant about male than female

displays of anger. Anger is also strongly related to feelings of unfairness: People are angry at those who they believe have received unfair advantages. Workmates who are perceived to have received inequitable economic rewards or promotions, spouses who shirk household and child-care duties, or students who receive unequal treatment are commonly sources of anger. Conversely, situations of social equality are less likely to produce angry emotions.

## INCREASING RATES OF MENTAL ILLNESS?

One of the most puzzling aspects about lifetime rates of all of the conditions considered in this entry is that studies at one point in time consistently show that older people have lower rates of lifetime prevalence of each mental illness. Depression illustrates this pattern. About 25% of people between 18 and 29 years old have had a depressive episode compared with 24% of people 30 to 44 years old, 20% among those 45 to 59 years old, and only 13% for those over 60 (Kessler, 2005). This finding, and similar findings for anxiety, phobia, and anger, is unexpected because, the older people get, the more years they have been at risk for developing a disorder. Older people have passed through each earlier stage of the life cycle so that, other things being equal, their lifetime rates of disorders should generally always be higher than those at younger ages. Yet, epidemiological studies show that lifetime rates of all disorders decrease as people age. What factors account for this phenomenon?

One possibility is that social changes have led to increasing rates of mental illness in each succeeding birth cohort. Many researchers have concluded that actual increases in rates of mental disorders have occurred in successive generations (e.g., Klerman & Weissman, 1989). This explanation, however, is not very plausible for a number of reasons.

Studies that measure mental illness prospectively uncover a striking fact about the reporting of mental illness over time. About half of survey respondents who report a mental illness at one point in time cannot recall the episode after as short an interval as 18 months (G. E. Simon & Von Korff, 1995). This could be because they simply forget the episode or because the symptoms were not sufficiently serious to be recalled. These studies also show a consistent inverse relationship exists between the length of time since an episode of depression occurred and people's ability to recall it. Lifetime age of first onset of mental illness reports are about 5 years before an interview, regardless of a respondent's age. These findings have a number of implications for estimating lifetime prevalence across different generations.

First, because most depressive episodes occur during younger ages, older people are more likely to forget previous episodes because longer periods of time have passed since they experienced the episode. Memories naturally fade when the events they refer to are no longer relevant to the individual. Second, current negative states of mind strongly affect people's recall of past negative states. What people remember depends on their current circumstances and mood when they are asked to remember past episodes of mental illness. Because older people are less likely to have current episodes of depression that can serve as reminders for past episodes they are also less likely to report past episodes. In addition, current older cohorts might be more reluctant than younger ones to acknowledge symptoms of mental illness.

Third, no theory about the cause any mental disorder predicts a consistent increase in prevalence over historical time. Genetic and psychological explanations rely on factors that are invariant or change very slowly over time and so are inconsistent with these trends. Although social theories do predict changing rates of mental disorder over time, they cannot account for why trends have increased so steadily and consistently across all types of disorders. Some social predictors of mental disorders such as rates of parental divorce and living alone have become more common, but others such as poverty and education levels have improved; many other trends, including unemployment and crime victimization, are not consistent over time. Finally, most prospective studies of the same people over several decades do not show rising rates of depression among younger cohorts (e.g., Murphy, Laird, Monson, Sobol, & Leighton, 2000).

The consistent finding that increasing age is associated with lower lifetime prevalence of all the disorders considered here is likely to be due to the difficulty people have in remembering and reporting emotional states that occurred in the distant past. It is much less likely that successive birth cohorts have experienced higher lifetime rates of mental disorder. Retrospective reports of subjective feeling states that occurred a long time ago should be viewed with skepticism.

## MEDICATIONS AND TREATMENTS

People born at different times have had vastly different experiences with the mental health system. Cohorts who entered adulthood during the 1930s, 1940s, and 1950s faced a mental health system that was largely dependent on large, public inpatient institutions. Since that time, most mental health treatment has occurred in outpatient settings or in private or general hospitals. Older people are more likely to associate mental illness with severe and stigmatizing conditions and are less likely to have favorable attitudes toward using mental health services than younger ones. Conversely, cohorts born more recently have been socialized to a therapeutic culture that emphasizes using mental health services and, especially, taking psychotropic

medications. The use of various mental health services, therefore, reflects strong generational effects.

Far more people received treatment for mental health problems in the early 2000s than in the decade preceding. For example, the proportion of people receiving treatment for depression has increased substantially. About 60% of people who report this condition in population surveys now obtain treatment for it, a nearly 40% increase since the early 1980s (Kessler et al., 2003). The percentage of the population in therapy for depression in a given year grew from 2.1% in the early 1980s to 3.7% in the early 2000s, an increase of 76% in just 20 years (Wang et al., 2006). The rate of outpatient treatment for anxiety disorders nearly doubled between 1987 and 1999, from 4.3 of every 1,000 people in 1987 to 8.3 of every 1,000 people in 1999 (Olfson, Marcus, Wan, & Geissler, 2004). Several factors account for rising rates of treatment for depression, anxiety disorders, and phobias, including increased mental health advocacy efforts, the emergence of direct-to-consumer advertisements for psychotropic medications, and growing perceptions of more efficacious and safe medications. People with anger disorders, however, are highly unlikely to seek mental health treatment: not surprisingly, they think that the objects of their anger, not themselves, are the ones at fault for their feelings.

The kinds of treatments people receive for depression and anxiety have also changed dramatically since the 1980s. About 75% of visits to physicians for therapy to resolve mental health problems now involve the use of some medication (Zuvekas, 2005). The most striking change has been the vast increase in the use of antidepressant medications. The use of antidepressants, including fluoxetine (Prozac), paroxetine (Paxil), sertraline (Zoloft), venlafaxine (Effexor), and fluvoxamine (Luvox) nearly tripled between 1988 and 2000; in any given month, 10% of women and 4% of men use these drugs. From 1996 to 2001 alone, the number of patients receiving therapy involving selective serotonin reuptake inhibitors, often called SSRIs, increased from 7.9 million to 15.4 million. Therapy involving antidepressants is especially popular among patients currently in their young adult years, although the rate of increase in the use of these drugs is also striking among the elderly (Crystal, Sambamoorthi, Walkup, & Akincigil, 2003).

The rising use of antidepressant medications has been accompanied by a sharp drop in the use of psychotherapy (treating mental, or emotional, or behavioral disorders, generally by means of extensive talk) since 1990 (Wang et al., 2006). For example, patients treated for anxiety disorders in 1999 were approximately half as likely to receive psychotherapy as they were in 1987. The decline in the use of long-term psychotherapy has been especially sharp (Olfson et al., 2002). For example, although cognitive-behavioral therapy (a type of treatment of mental illness that teaches the patient to try to adapt to stress and the environment by thinking about phenomena using precepts taught by the therapist) is often effective for the treatment of anxiety disorders, psychiatrists rarely use it.

A number of reasons account for the rising rates of drug treatment and falling rates of psychotherapy. One concerns the growing importance of managed health care, which relies on strategies that reduce health care expenditures by supporting the least expensive possible treatments (Mechanic, 2007). Most managed care plans provide more generous benefits for drug than for psychotherapeutic treatments and usually place no barriers on antidepressant use. Conversely, these plans often have severe limits on payments for psychotherapy. The result is that patients themselves prefer drug treatments because they involve lower out-of-pocket costs.

In addition, managed care also encourages the use of general practice physicians, who almost always prescribe medication, instead of mental health specialists who are more likely to use psychotherapy. As a result, most of the expansion of mental health treatment occurred in the general medical sector (Wang et al., 2005). Between the early 1990s and early 2000s, rates of mental health service use increased 159% in the general medical sector compared with 117% in specialty psychiatric services and 59% among other mental health personnel (Wang et al., 2006).

Another major trend leading to the growing use of medications has been the massive use of direct-to-consumer drug advertisements in the popular media. Before 1997, drug advertising could only be directed to physicians. Since that date, drug companies can appeal directly to consumers, who have flocked to physicians with requests for these drugs. Other reasons for the changing patterns of mental health treatment include increased mental health advocacy efforts, often funded by pharmaceutical companies, and the more widespread use of screening instruments aimed at detecting mental illness.

The widespread use of antidepressant medications has raised concerns about the harmful consequences of overmedication. These include potential adverse effects from long-term use of antidepressants and other psychotropic drugs, withdrawal difficulties, and their questionable effectiveness for treatment of mild disorders. In addition, the widespread use of medication as a first-line treatment can preclude consideration of other sorts of treatments, including various forms of psychotherapies as well as self-help alternatives such as changes in diet and exercise and the use of natural networks of social support.

## GAPS IN KNOWLEDGE

Many issues about mental health among adults are actively debated. One puzzle regards definitions of mental

disorder. Many mental health professionals and researchers assume that any psychological condition that results in negative outcomes must be a mental disorder. The problem with this assumption is that it defines an enormous amount of human behavior as abnormal. Community surveys of mental illness indicate that almost half the general population has a mental illness at some point in their lives and more than one quarter have experienced a mental illness more than the past year. Yet many of these conditions might actually be temporary and understandable responses to distressing events such as romantic breakups, job losses, or receiving news that an intimate (or oneself) has a life-threatening illness (Horwitz & Wakefield, 2007). Feelings of sadness, fear, shyness, and anger can be impairing but are not necessarily indications of disordered depression, anxiety, social phobia, or IED. Even so, researchers assume that acknowledgement of items on self-reported surveys indicate signs of a mental disorder as opposed to natural responses to distressing social contexts. Much work needs to be done in developing techniques that can distinguish appropriate negative emotions from mental disorders.

The separation of normal from disordered emotions is especially important because it has implications for health care policy. Treating normal emotions as if they were disordered can lead to pharmacotherapy that is neither necessary nor helpful. In addition, this point of view can lead to interventions that are based on pessimistic notions of human resilience. For example, shortly after the September 11, 2001, terrorist attacks, the Commissioner of the New York City Health and Mental Hygiene Department told Congress, "We face the possibility of a sharp increase in chronic and disabling mental health problems" (Satel, 2003, p. 1571). Although studies did show sharp increases in rates of mental health problems in the immediate aftermath of the attack, rates had returned to normal within 6 months of that date (Galea et al., 2002). During the same period, rates of use of mental health facilities did not show any substantial increase. In fact, residents of New York City, Washington D.C., and the United States in general showed great psychological resilience. Mental health policy greatly underestimates the ability of people to manage distressing events through self-help, social support, and informal community institutions.

Another puzzle regards the explanation of the young mean age of onset of most mental disorders, which is between 7 and 15 years for impulse control disorders, 6 to 22 for anxiety disorders, and 18 to 43 for depressive disorders (Kessler, Berglund, et al., 2005). In addition, as has been seen, as people grow older their chances of developing a mental disorder decrease. This pattern is exactly the opposite of that for virtually all chronic physical disorders not present at birth. Why mental disorders uniquely arise during the prime reproductive years and then have declining frequency poses a yet unsolved (and rarely addressed) evolutionary puzzle.

A third issue regards whether the current diagnostic system, which sharply distinguishes many distinct disorders from one another, is optimal or whether broader and more continuous categories better fit the underlying reality of most disorders. The bulk of the evidence indicates that many disorders, especially all the anxiety disorders and forms of depression, could be variable expressions of a similar underlying abnormality (Barlow, 1988). Most of the disorders considered here have very high rates of co-occurrence. Patients with one anxiety disorder usually also have additional anxiety disorders: For example, about 80% of patients with generalized anxiety disorder have some additional disorder. Nearly 90% of patients with agoraphobia and more than 80% with simple and social phobias also report at least one other type of mental disorder (Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996).

In addition, anxious people generally have concurrent symptoms of depression whereas depressed people often present concurrent symptoms of anxiety. The causes, prognoses, and treatments for distinct disorders share more similarities than differences, suggesting that the current emphasis on distinct disorders is as much of a product of the social organization of the mental health professions and their desire to receive economic reimbursement for their services as of scientific knowledge. This has led a number of scholars to suggest that the various anxiety and depressive disorders are variants of the same temperamental type that might better be called *neurotic* or irrationally *harm-avoidant* (e.g., Akiskal, 1998). From this viewpoint, people might inherit predispositions to develop anxiety and mood disorders in general, not a particular type of disorder.

A final gap is the lack of knowledge about how mental health has changed over different birth cohorts and historical time. As already suggested, claims of substantial increases in mental health problems in recent decades seem to have more to do with changes in diagnostic criteria and measurement problems than with actual changes in either mental health or the social conditions that give rise to mental health symptoms. Researchers lack the kinds of prospective studies, particular those undertaken over long periods, that can better estimate changes in mental health over time. Similarly, little is known about how large scale historical trends such as the negative effects of globalization of work, macroeconomic changes, changing gender roles, rising income inequality, and other major social changes affect mental health over the life course.

## POLICY ISSUES

Almost all mental health treatment now takes place in community settings. Most hospitalization that does occur

is usually of brief duration and in general or private hospitals rather than public mental institutions. No indications confirm that the mental health system will return to the widespread use of the large, public inpatient institutions that dominated the system in the 19th and much of the 20th centuries. The challenges for mental health policy lie in delivering the most effective treatment in community-based systems.

One important policy issue regards mental health disorders receiving parity with more clearly physical disorders—that is, the payment for the treatment of mental disorders be seen as on an equivalent basis with physical disorders. At present, long-term treatment, inpatient care, and psychotherapy are reimbursed at lower rates and for shorter periods of time than physical disorders. To date, the many efforts at remedying this situation have not been successful, largely because of fears that parity in payment for mental disorders has the potential to bankrupt the health care system. If the substantial number of people who indicate that they have untreated mental disorders became more likely to seek treatment, it might be impossible for insurance companies or the federal government to cover the costs. Because of these concerns and their implication for mental health parity, it is especially important for the field to develop definitions of mental illness that include conditions that benefit from professional treatment while excluding those that will usually resolve in the absence of professional care. Limiting parity to serious mental disorders may result in a system that is oriented toward treating those conditions that can benefit the most from professional treatment.

The issue of prevention is also critical. Many mental health policies, such as screening for unrecognized mental disorders in primary medical care or in schools or bringing in grief counselors in the immediate aftermath of traumatic events, are based on the assumption that rapid identification and treatment of mental disorders can not only relieve current distress but also prevent more serious disorders from developing in the future. Although prevention has theoretical appeal, it also entails certain costs. Some evidence does suggest that prevention can have positive effects within comprehensive health care settings, but there is no evidence for its efficacy in regular mental health practice. Indeed, evidence is overwhelming that some common forms of prevention, such as single-session debriefings after traumas, are not only ineffective but can be harmful (Rose, Bisson, Churchill, & Wessely, 2002). In addition, given the size of the population with untreated mental disorders, focusing on identifying and treating people with unmet needs for mental health care could overwhelm the health care system. This, in turn, could lead the mental health system away from people with the greatest need for professional services toward those who neither want nor will benefit from treatment.

A final general issue relates to the costs and benefits of subjecting a wide range of human problems to medical care. *Medicalization* refers to defining and treating problems that previously were been outside the medical system as problems to be handled by medical techniques. Normal sadness becomes major depressive disorder, fear is transformed in a variety of anxiety disorders, shyness becomes social phobia, and anger becomes IED. Medicalization promises the benefits of efficient, socially valued, and nonstigmatizing treatment that can often relief the pain of unpleasant emotional experiences. It has the potential costs, however, of neglecting alternative, and sometimes more effective, ways of responding to problems, atrophying self-help solutions, and disregarding the importance of fostering human agency.

**SEE ALSO** Volume 1: *Attention Deficit/Hyperactivity Disorder (ADHD); Autism;* Volume 2: *Risk; Stress in Adulthood; Suicide, Adulthood; Trauma;* Volume 3: *Dementias; Loneliness, Later Life; Quality of Life; Stress in Later Life.*

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# MIDLIFE CRISES AND TRANSITIONS

The boundaries of midlife are not well defined; however, the most common conception is that middle age begins at 40 and ends at 65 (Lachman, 2004). This period is characterized by a remarkable complexity of roles, relationships, and resources. Despite the image of midlife as

a relatively stable life stage, middle-aged adults typically experience multiple life crises and transitions, many of which pose developmental and social challenges. Important crises and transitions include menopause, parental death, marital dissolution, children leaving home, problems in the lives of adult children, and caregiving responsibilities. These events often entail negative consequences, such as economic hardship, social isolation, psychological distress, and threat to self-concept. Yet these adverse repercussions are often short-lived, and over time individuals may even experience positive consequences, such as wisdom, personal growth, improved coping skills, and stronger interpersonal relationships.

## DEFINITIONS OF MIDLIFE CRISES AND TRANSITIONS

Developmental and life span psychologists conceptualize crisis as a normative developmental challenge, a crucial point at which individuals can develop in alternative ways (Lachman & James, 1997). Early work on adult development focused on life stages and orderly transitions. For example, Erik Erikson (1963) placed midlife in the context of eight lifespan stages, whereby each stage encompassed a crisis, or a challenge that needs to be resolved. In midlife, the central challenge is achieving generativity, or moving past a narrow focus on one's self, and instead nurturing and guiding the next generation (Lachman, 2004).

Sociologists, by contrast, conceptualize crises as stressors with potentially adverse consequences for physical and mental health. The meaning of specific stressors is understood from a life course perspective, which places individual development in the context of historical, cultural, and social structures and processes (Bengtson & Allen, 1993). A transition—one of the key concepts in life course research—is a change in status that is discrete and bounded in duration, although it may have long-term consequences (George, 1993). Many transitions are stressors because they threaten well-being and require coping and adjustment (Pearlin, 1999).

Psychological and sociological perspectives on crises and transitions intersect in the notion of a psychological "turning point"—an important life situation or a new insight into one's self that becomes a motive for redirecting and changing one's life (Clausen, 1995). Turning points at midlife can be brought on by both positive and negative experiences.

## COMMON CRISES AND TRANSITIONS IN MIDLIFE

One of the most popular images of midlife is the experience of a "midlife crisis." Research and theory in the 1970s described the midlife crisis as an almost exclusively male phenomenon. It was viewed as a crisis of identity that involved increased introspection, a realization of limited time, and a preoccupation with lost opportunities (Rosenberg, Rosenberg, & Farrell, 1999). However, since then researchers have found little evidence to support the idea that the midlife crisis is a universal developmental phenomenon (Wethington, Kessler, & Pixley, 2004). Instead, other crises and transitions appear to have more profound implications for midlife development.

**Menopause** Menopause has been traditionally viewed as women's midlife crisis because it is a major change in reproductive capacity. Researchers have found no evidence to support the stereotypical view that women hold negative attitudes toward menopause (Avis, 1999). Another notion that persists is that menopause commonly leads to depression. Community-based studies demonstrate that psychological trauma and distress are not typically associated with this normal transition in women's lives (Avis, 1999). The so-called "menopausal syndrome" is more likely explained by personal characteristics and past experiences, such as previous history of depression, than menopause per se (Avis, 1999).

**Parental Death** The death of a parent during middle age is widely recognized as a life-course marker (George, 1993). Parental death may be less stressful than other types of bereavement, partly because it is considered a normal part of middle age. Still, it is a major turning point for most people. It may compel individuals to confront their own mortality, leading to a reevaluation of identities, values, and behaviors (Kranz & Daniluk, 2002). Losing the buffer of the parent generation may force one to finally "become an adult" and may also promote psychological growth, increased maturity, and a greater appreciation of personal relationships (Aldwin & Levenson, 2001).

**Marital Dissolution** Spousal death is most likely to occur to adults in their 70s and older, whereas divorce typically occurs during the first decade of marriage in young adulthood. Thus, both divorce and widowhood are "off-time" transitions at midlife. Off-time events, or events that occur earlier or later than expected, may have particularly stressful consequences (Neugarten, Moore, & Lowe, 1965). Middle-aged widows—those widowed before 60—are more likely than their older counterparts to become poor (Holden & Smock, 1991). Similarly, divorced middle-aged women might experience greater financial problems than their younger peers because the most pronounced declines in per capita income are associated with marriages of longer duration (Holden & Smock, 1991), and middle-aged women have been married, on average, for a longer period than women who divorced in young adulthood. Among men, marital dissolution may be associated with social isolation

and loss of emotional intimacy (Gerstel, Riessman, & Rosenfield, 1985).

A study of men and women who became widowed or divorced between their mid-50s and mid-60s (Pudrovska & Carr, 2005) showed that recently bereaved and divorced persons report higher levels of depression and alcohol use, even after adjustment for selection factors, health, family characteristics, and social and socioeconomic resources. This effect may reflect the fact that persons who lose a spouse or become divorced in their 50s or early 60s have few peers who share their experiences and may lack institutional supports to help them cope with marital loss, given that most recently divorced persons are young adults under 40, whereas most recently bereaved persons are older adults.

**Empty Nest and Problems in the Lives of Adult Children** In the family life cycle approach (Glick, 1977) the empty nest following the launching of the last child is a quintessential midlife stage. The launching process minimally extends from the time the first child leaves home for the first time to the time when the last child leaves home for the last time (White, 1994). The empty nest tends to occur later for parents who are in their intact first marriage, are African or Mexican American, and have more children, more sons, more unmarried children, or a higher income (Aquilino, 1990).

The empty-nest stage has been traditionally viewed as a difficult time for midlife women. This transition symbolized the end of women's most intensive years in the mother role, which was usually considered one of the most fundamental sources of a women's identity (Black & Hill, 1984). Although early clinical studies reported depression following the empty-nest transition, more recent studies of the general population revealed positive psychological outcomes for empty-nest parents (White & Edwards, 1990). The empty nest was shown to be associated with improved marital happiness for all parents and increased overall life satisfaction when there was frequent contact with nonresident children (White & Edwards, 1990).

Because of the increased importance of college education, rising ages at marriage, and soaring housing costs, current generations of young adults remain in the parental home longer than prior generations (Aquilino, 1990). These trends have created a demographic context in which the empty nest is no longer a nearly universal experience at midlife. William Aquilino and Khalil Supple (1991) suggested that most parents who coreside with young adult children report high levels of satisfaction with the presence of children at home, particularly when the quality of parent–child relationships is high. Yet parental satisfaction is adversely affected by adult children's inadequate income and inability to maintain an independent household.

Overall, parents are distressed when their adult children have problems—whether children live in the parental household or independently. Adult children's problems, such as illness, unemployment, financial difficulties, and strains in marital relationships, are associated with parents' greater negative affect (Pillemer & Suitor, 1991), lower levels of positive affect, less self-acceptance, and poorer parent–child relationship quality (Greenfield & Marks, 2006).

**Caregiving Responsibilities** The middle-aged are often viewed as the "sandwich generation" who experience financial, psychological, and physical demands from responsibilities to both younger and older generations while being in the paid labor force, although only a minority of middle-aged adults provide care to their children and parents at the same time (Marks, 1996). Yet more than half of the women with a surviving parent spend at least some time in a caregiving role (Himes, 1994). Women in the middle often face caretaking dilemmas and are more likely than men to sacrifice their careers to take care of spouses and parents (Moen & Wethington, 1999). Caregiving responsibilities often force women to either terminate their employment or reduce work hours, which results in decreased income (Evandrou & Glaser, 2003). As a chronic strain, caregiving may adversely affect caregivers' physical and mental health (Aneshensel, Pearlin, Mullan, Zarit, & Whitlach, 1995). Yet research also reveals psychological benefits from caregiving, such as mastery, self-esteem, and mattering—the sense of being a person of significance to the well-being of loved ones (Moen, Robinson, & Dempster-McClain, 1995).

## COPING WITH CRISES AND TRANSITIONS

The challenges of midlife are typically matched by the extensive material, psychosocial, and coping resources of middle-aged adults; thus, most people in midlife successfully adjust to crises and transition and show resilience to burdening and demanding circumstances (Heckhausen, 2001). One of the most consistent findings to emerge from research on crises is that the negative psychological and interpersonal consequences of stressful events are relatively short-lived, and that psychological well-being of individuals who experience even the most disruptive transitions eventually approaches precrisis levels (Booth & Amato, 1991).

Research has increasingly focused on the positive consequences of crises, such as posttraumatic growth (Tedeschi, Park, & Calhoun, 1998) or the perceived benefits of stress (Aldwin & Sutton, 1998). Crises can lead to ego development, wisdom, stronger interpersonal relationships, more effective coping skills, and higher levels of mastery and self-

esteem (Aldwin & Levenson, 2001). For example, widowhood and divorce in the long term tend to be accompanied by a positive shift into a new life phase, personal growth, and increased sense of control (Feldman, Biles, & Beaumont, 2001; Umberson, Wortman, & Kessler, 1992).

## THE FUTURE OF RESEARCH ON MIDLIFE CRISES AND TRANSITIONS

Although midlife spans 25 to 30 years, little is known about the diversity *within* the middle-aged group with respect to specific periods of midlife, such as early midlife and late midlife (Staudinger & Bluck, 2001). The nature of crises and transitions confronting middle-aged adults is likely to differ by stages of midlife. However, many existing studies that examine such age differences use cross-sectional data and, thus, cannot fully distinguish intrapersonal changes within cohorts from intercohort variation (e.g., Ryff & Keyes, 1995). The use of longitudinal panel data can help to distinguish age-related developmental processes from differences among birth cohorts.

The experiences of members of racial and ethnic minorities at midlife have remained largely unexplored. Yet the nature, antecedents, and consequences of crises confronting middle-aged White persons do not adequately reflect the challenges and circumstances of other racial groups. Detailed racial and ethnic comparisons have not been a prominent theme in the literature.

Finally, demographic trends of recent decades have created a remarkable complexity of family structure and interpersonal relationships. Yet scholars still have limited knowledge about heterogeneity of individual trajectories and the so-called "nonnormative" pathways that become increasingly common, such as having a first child in midlife, choosing to remain single and/or childfree, and being in same-sex relationships and unions. Moreover, despite the trends in men's greater family involvement and women's unprecedented labor force participation (Casper & Bianchi, 2002), the interplay of work and family roles among middle-aged men and women have not been fully explored. Family statuses and transitions matter for midlife men's physical and mental health (Barnett, Brennan, Raudenbush, & Marshall, 1994), whereas career trajectories have profound implications for women's well-being (O'Campo, Eaton, & Muntaner, 2004; Simon, 1995). Given these trends toward increased complexity of family and work arrangements at midlife, public policies should be directed at facilitating work-family balance not only among young adults but also among middle-aged men and women.

**SEE ALSO** Volume 2: *Divorce; Menopause; Stress in Adulthood; Parent-Child Relationships, Adulthood;* Volume 3: *Caregiving; Retirement; Stress in Later Life.*

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***Tetyana Pudrovska***

# MILITARY SERVICE

Military service entails joining a branch of the armed forces through voluntary enlistment, conscription during a draft, appointment, or in some societies as a mandated duty of citizenship. In the United States, the military services include the Army, Navy, Air Force, Marine Corps, and Coast Guard. Active duty military service refers to full-time engagement in one of these services; it includes members of the Reserve Components when they are serving or in full-time training, but does not include full-time members of the National Guard. Each branch, listed above, has a reserve component. The reserve components of each branch are part-time military personnel who serve a period of active duty after attending basic and job training that usually last several months. Following this active duty training period, reserve personnel return to civilian life; however, for the remainder of their service obligation, they attend trainings and work in their job specialty for their unit one or two days per month. Additionally, they attend a two-week active-duty training each year. After 20 years of reserve service or upon reaching age 60 years, reserve personnel are entitled to a retirement benefit based on reserve pay. Members of the National Guard are under Federal and State jurisdiction, unlike members of the other armed forces, who are under Federal jurisdiction only.

Members of the National Guard can be deployed by the governor of their state or the president. When not

deployed on active duty, members of the National Guard are only required to train one weekend per month and during a two-week period each year. Veteran status is conferred upon those who are on active duty or have served previously on active duty and received an other-than-dishonorable discharge. Exposure to combat is not a prerequisite for active duty, veteran status or benefits eligibility. Active duty service encompasses a range of activities, including training, intelligence gathering, conducting maneuvers to ensure preparedness for combat, and serving domestically and overseas in various capacities deemed important for the defense of the Untied States and its allies.

Although there is variation across historical periods, such as when there is an ongoing war, draft, or mobilization of the Reserve Components, persons who serve in the military generally enter service at relatively young ages and exit after only a few years on active duty. From 1941 to 1973, American men of specific ages and a diverse range of personal characteristics were subject to a draft (Flynn, 1993). However, most men and women who have served in the U.S. military in the 20th and 21st centuries have done so voluntarily. Since 1973, the U.S. military has been in what is commonly known as the era of the All-Volunteer Force (AVF).

Military service is selective, reflecting both individual choices to enlist and the military's authority to reject those deemed incapable of serving effectively. To enter the military, people must meet specified eligibility criteria, pass physical and mental health screenings, undergo standardized training regimens, and be willing and able to adhere to the military code of conduct. Each of the military services is organized hierarchically by rank, with enlisted personnel broadly distinguished from officers. Enlisted personnel begin at the lowest rank in the military and serve as the main workforce within it. Enlisted personnel generally have high school educational attainments; with time, good service, training, and education, advancement can be expected. Officers enter a branch of the military services in a supervisory capacity and must have a 4-year college degree in order to be commissioned as an officer. The chain of command is clearly specified and enforced. While there is opportunity for advancement, especially among those who make military service a long-term career, the enlisted and officer ranks select persons with different characteristics and provide members with access to different types of assignments, risks, and rewards.

Researchers who study military service in relation to the life course recognize that the military is a powerful institution whose potential to transform lives for better or worse varies across individual characteristics, the timing of military service in the life course, service experiences, and historical periods. These insights serve as the foundation for theories about, and empirical life course studies of, the role of military service in men's and, to a lesser extent, women's lives. Taken as a whole, the existing body of life course research on military service succeeds in connecting "the micro- and macro-levels of analysis, thus connecting the soldier's story to that of his [or her] changing society" (Modell and Haggerty, 1991, p. 205).

## MILITARY SERVICE AND LIFE COURSE DISCONTINUITY

Studying the role of military service in the life course provides researchers with a rich opportunity to investigate each of the five major principles of the life course paradigm: human agency; location in time and place; timing; linked lives; and lifelong development. Glen H. Elder Jr. is responsible for some of the most influential theorizing about the role of military service in the life course and the importance of military service for life course studies. By focusing age at entry into the military, his work develops and tests two hypotheses: the military as turning point and as life course disruption. Both hypotheses emphasize the potential of military service to produce discontinuity in the life course.

The military as turning point hypothesis focuses on people who enter the military at younger ages, such as persons who enlist right after high school graduation, because the chances for redirection of the life course are maximized and disruption to an established life course is minimized. Elder (1987) argues that early entry into the military enables a pause in individual development, which both delays the transition to adulthood and allows for the maximal utilization of service benefits. Early entrants are often highly disadvantaged with few other options; they see military service as a route out of difficult life circumstances. These are precisely the persons who may benefit most from the health and educational benefits available to veterans.

According to the life course disruption hypothesis, an individual's relatively late entry into the military has the potential to interfere with established marital, parenting, and occupational trajectories, which may have consequences for the subsequent patterning of the life course and for outcomes later in life. Late entrants often come from more advantaged backgrounds than earlier entrants. Moreover, because late entrants are more likely to have completed their educations and will have less time upon completion of their service to take advantage of veterans' educational benefits, they may not experience the gains that accrue to more disadvantaged, earlier entrants. There are several reasons why people enter the military at older ages. Older entrants include people who enlisted or were drafted during a war; delayed entrance in order to

complete college or a service academy prior to being commissioned as an officer; entered as physicians to complete a "pay back" after the military paid for their medical education; decided after their transition to adulthood that they were prepared to handle the challenges the military entails or that the military offered them opportunities that were not available in the civilian sector; and responded to incentives for enlistment that the military sometimes offers.

Considerable research shows that early entry into the military can produce a positive turning point in the life course trajectories of initially disadvantaged men. For example, focusing mostly on veterans of World War II, Elder (1986) reports that early entrants had more disadvantaged family backgrounds, poorer grades, and lower feelings of self-adequacy. However, because military service delayed their transition to adult roles and responsibilities, they were able to equal the occupational achievements of, and have more stable marriages and experience larger gains in psychological strength than non-veterans. Early entrants were also much more likely than later entrants to report retrospectively that their lives had followed a different and more rewarding course as a result of their military service. Other studies also support the military as positive turning point hypothesis. For example, Sampson and Laub (1996, p. 364) conclude: "Military service in the World War II era provided American men from economically disadvantaged backgrounds with an unprecedented opportunity to better their lives though on-the-job training and further education" (see also Laub and Sampson, 2003).

Elder, Shanahan, and Clipp (1994) provide direct evidence in support of the life course disruption hypothesis. They report that for each year of delay into military service the economic and job benefits associated with

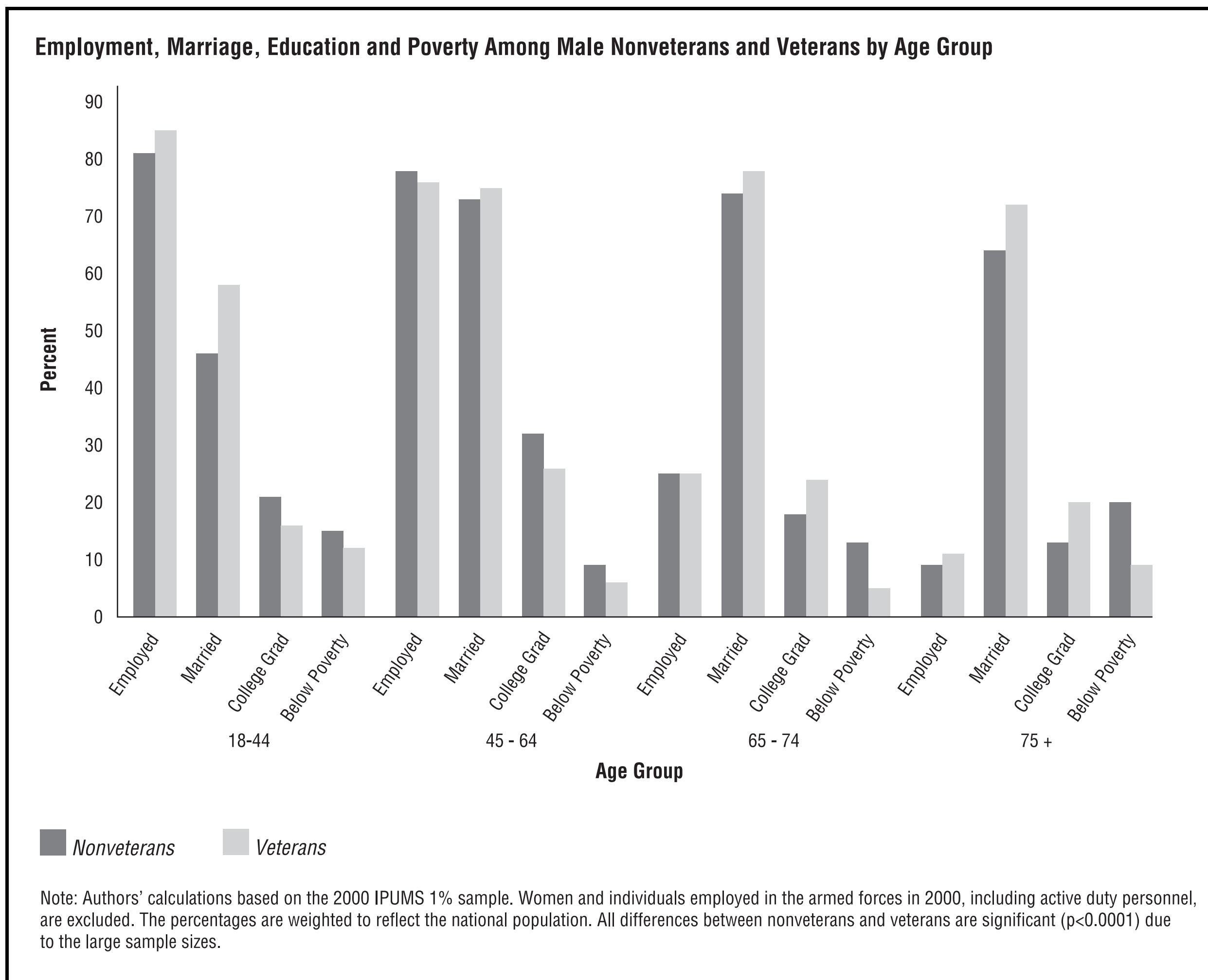


***Figure 1.*** *Differences between veterans and nonveterans across these four age groups, which experienced unique historical circumstances during early adulthood, demonstrate that military service is associated with a variety of social and economic outcomes.* CENGAGE LEARNING, GALE.

## G.I. BILL

The Servicemen's Readjustment Act of 1944 (Public Law 346), more commonly known as the G.I. Bill (of Rights), was signed into law by President Franklin D. Roosevelt on June 22, 1944. The G.I. Bill extended numerous social benefits to any veteran of World War II who had served for 90 days or more, except those who received dishonorable discharges. These benefits included unemployment income support for as long as 1 year; guaranteed, low-interest loans to purchase homes, farms, or businesses; and tuition, fee, and living allowances to support education or vocational training. Although all of these benefits were widely used, the education and training benefits were used most frequently. By 1956, 2.2 million veterans had used G.I. Bill benefits to attend college, whereas 5.6 million had obtained noncollege training. Although the G.I. Bill was inclusive and expanded opportunities for Blacks as well as Whites, some Black veterans, particularly in the Deep South, had difficulty accessing or using benefits for which they were eligible. Overall, the G.I. Bill expanded access to education for veterans of World War II, which transformed their life-course trajectories, the lives of their spouses and children, and the nation as a whole.

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military service were reduced and the risk of life disruption and related costs increased. Moreover, partly as a result of the work-life disadvantages they experienced, late-mobilized men were at greatest risk of subsequent downward trajectories in physical health.

### MILITARY SERVICE AND SOCIOECONOMIC, MARRIAGE/ FAMILY, AND HEALTH OUTCOMES

Figure 1 uses data from the 2000 U.S. Census to describe how men who have served in the military are different than men who have not served in terms of employment, marriage, college graduation, and poverty statuses. Four age groups are distinguished to highlight persons with different historical experiences during young adulthood: individuals age 75 years or older in 2000 were born in 1925 or earlier and were young and middle-aged adults during World War II; persons in the 65 to 74 age group were born between 1926 and 1935 and became adults around the time of the Korean War; people in the 45 to 64 age group were born between 1936 to 1955 and were subject to the Vietnam War; and persons in the youngest age group were born from 1956 to 1978 and came of age during the All-Volunteer Force era and experienced the first Gulf War. At all ages, veterans are more likely than nonveterans to be married, and they are less likely to be in poverty. In the youngest and oldest age groups, veterans are more likely than nonveterans to be employed, whereas in the 44–64 age group veterans are less likely than nonveterans to be employed, and in the 65–74 age group the percentage employed is similar among veterans and nonveterans. Differences in marriage and poverty statuses between veterans and nonveterans are larger in the two oldest age categories, suggesting that the social and economic advantages of military service may accumulate over the life course for those who serve in the military as young adults. Differences are also apparent across the age groups in the percentage of veterans and nonveterans who obtained a college degree. Among the two youngest age groups, veterans are less likely to have a college education than nonveterans. But among the two oldest age groups, veterans are more likely than nonveterans to have a college education. These age-based differences likely reflect variation across cohorts in the characteristics of individuals who served, the widespread use of the G.I. Bill among men who served in World War II and Korea, and changes in the terms of the G.I. Bill during the era of the All-Volunteer Force.

Evidence such as this, as well as the foundational work of Elder and his colleagues, point to the importance of military service for socioeconomic, marriage/ family, and health outcomes. Research has addressed a range of questions about how military service in different historical periods has affected outcomes in each of these domains overall and among specific subgroups of veterans.

***New Recruit.*** *At the Military Recruiting Center in Bridgeport, CT, Army Staff Sgt. Jose Cruz shakes hands with 18-year old recruit Camilo Hernandez of Stratford, CT.* AP IMAGES.

## SOCIOECONOMIC ATTAINMENT

Considerable evidence shows that large numbers of World War II veterans took advantage of the G.I. Bill benefits available to them and enhanced their educational attainments over what they would have been in the absence of military service (Mettler, 2005). While women and Black male veterans, especially those born in the South, were less likely than White male veterans to use these benefits, the post-World War II G.I. Bill significantly increased training and college attendance among the many veterans who took advantage of its generous benefits.

However, researchers who have examined the effect of military service on educational outcomes in other time periods find that veterans have lower educational attainments than nonveterans. For example, during the Cold War period from 1955 to 1965, G.I. Bill benefits were not available. In her analysis of college attendance among veterans who served during this period, MacLean (2005) finds that those who were drafted were less likely to attend college than those who were not drafted and nonveterans. Additionally, she finds that military service redirected academically ambitious men away from college attendance. Researchers who have focused on Vietnam-era veterans find that veterans have lower educational attainments than nonveterans in the short-term (Teachman and, Call 1996), although they catch up to their non-veteran contemporaries to some extent over time (Teachman, 2005). These differences across and within cohorts may be due in part to variation in enlistment rates between socioeconomic status groups.

Research on the effects of military service during the AVF era on educational attainment also finds negative effects on schooling (Teachman, 2007). This relationship is attributed in part to the reduced availability and value of G.I. Bill benefits in the AVF era. Veterans are now required to contribute some of their earnings in order to access the educational benefit, and many service men and women choose not to do so. However, the effects of military service on educational outcomes are not uniform, as they vary by branch of service and characteristics of veterans. For example, Blacks show increases in schooling reduce the educational deficit they exhibit at the time of discharge.

Other research focuses on occupational attainment and income among veterans and also shows mixed effects

depending upon individual characteristics and historical periods. Dechter and Elder (2004) find that officers in World War II were able to convert their service into post-war occupational advancement, whereas other servicemen actually fared worse than nonveterans. Consistent with this finding, Angrist and Krueger (1994, p. 74) conclude that "World War II veterans earn no more than comparable non-veterans and may well earn less," even though they had access to generous G.I. Bill educational benefits. Studies focusing mostly on Vietnam era veterans suggest that military service in a war zone and combat exposure lead to worse labor market experiences and lower earnings. Angrist (1990) finds that White male Vietnam War veterans earned 15% less than the earnings of comparable nonveterans in the early 1980s. The lower earnings of Vietnam-era veterans may in part be attributable to post-traumatic stress and other psychiatric disorders that are more prevalent among such veterans.

Some studies have demonstrated positive effects on earnings for African-American and other non-White veterans who served in World War II (Teachman and Tedrow, 2004) and during the AVF era (Angrist, 1998), which provides evidence of a positive turning point in the earnings trajectories of initially-disadvantaged men. Recently, Teachman and Tedrow (2007) examined income trajectories among those who served in the AVF era and found that men from disadvantaged backgrounds earned more than their civilian counterparts; however, this premium dissipated after discharge.

## MARRIAGE AND FAMILY OUTCOMES

Reflecting the life course principle of linked lives, researchers have been attentive to the effects of military service on marriage, divorce, and other family-related outcomes. Considerable attention has been paid to the effects of military service on divorce. The accumulated evidence suggests that veterans are considerably more likely to divorce than comparable nonveterans, although one study that focused on active-duty personnel in the AVF era indicates African-American enlistees have lower divorce rates than comparable White enlistees (Lundquist, 2006).

Considerable evidence across different historical periods shows that combat exposure contributes to marital problems and marital instability (Gimbel and Booth, 1994). However, as was the case with socioeconomic outcomes, these patterns vary across persons and periods. Call and Teachman (1991, 1996) focus on the timing of marriage in relation to military service in order to examine the life course disruption hypothesis. Among White male Vietnam-era veterans, they find that both combat and non-combat veterans were as likely as nonveterans to marry, and marital stability was no lower among those who had married prior to entering the military than among those who had married during or after military service. Thus, in contrast to findings for World War II veterans (Pavalko and Elder, 1990), they found no support for the disruption hypothesis among these veterans.

A number of studies have addressed the effect of military service on marriage and fertility in general and Black-White differences in these outcomes in particular (Lundquist, 2004; Teachman, 2007). In this literature, a range of arguments are advanced to support the hypothesis that the American military became a relatively "pro-family," "pro-marriage" institution partly to recruit and retain personnel after the AVF replaced the draft in 1973. For example, policies that link coveted opportunities to live off base with a housing allowance to marriage may promote marriage among active-duty personnel. Beyond these inducements, these authors contend that the enforcement of the military's equal opportunity policies sharply reduces racial discrimination in earnings, job advancement, and promotion, thereby reducing one of the key barriers to marriage for many African Americans. Consistent with these arguments, the Black-White difference in marriage, which is substantial in the civilian population, is not present among active-duty military personnel. This fact likely has important implications for the subsequent life course trajectories of Black veterans, as well as those to whom their lives are linked.

Similarly supporting the "pro-family," "pro-marriage" character of the American military, Lundquist and Smith (2005) found that active-duty military women had higher fertility than comparable civilian women. This fertility difference was explained by the earlier and higher rates of marriage among the active-duty women.

## HEALTH OUTCOMES

A growing body of research links military service to subsequent health and mortality. This work builds on previous life course research that has shown that military service, in particular combat exposure, has a direct impact on health and health-related resources. These studies suggest that military service may directly expose veterans to circumstances, produce injuries, or engender psychological conditions that have negative implications for physical and mental health trajectories and mortality. As noted previously, military service-related health problems may influence socioeconomic and marital/family outcomes, thereby impacting the lives of persons to whom veterans are linked as well as the veterans themselves.

Building on the life course disruption hypothesis, Elder, Shanahan, and Clipp (1994) posit a stress and health relationship. They hypothesized that late age at mobilization produces life course disruptions, which in

turn produce stressful social disruptions, such as separation and divorce, residential changes, emotional distance from children, temporary periods of unemployment and erratic work lives, which have implications for health in later-life. Using data from the Stanford-Terman longitudinal study, which mostly includes World War II veterans, these authors report that late entrants, who are likely to have had the greatest social disruptions, were more likely to experience sporadic health problems, lifetime health declines, and constant poor health after exiting the military. However, social disruption did not fully account for the effect of late entry; rather it was the joint effect of late entry and high levels of social disruption that seemed to adversely affect health. A subsequent investigation by these investigators using the same data (Elder, Shanahan, and Clipp, 1997) found that exposure to combat predicted physical decline or death during the 15-year post-war interval from 1945–1960.

Two studies indicate higher disability and mortality among male veterans decades after the end of their military service. Bedard and Deschênes (2006) found that military service during World War II and the Korean War was associated with higher mortality later in life; 35% to 79% of the excess deaths were due to heart disease and lung cancer. The investigators argue that this excess mortality among veterans is attributable to military-induced smoking resulting from pro-tobacco military policy (i.e., free and reduced-price distribution of cigarettes) in this period. In a sample of men 51 years old and older, London and Wilmoth (2006) found that service in the military led to a greater likelihood of dying compared to those who had not served, even after taking into account early-life circumstances (race and father's education) and mid- to late-life characteristics (marital status, socioeconomic status, health status, and health behaviors). Among the younger cohorts, they found that military service improved the survival of African-American men, which they interpret as evidence of a positive turning point. Such a positive turning point may have occurred because military service afforded these African-American veterans greater access to education, income, family integration, or health care.

## CONCLUSION

While the existing research has revealed us a great deal about the ways in which military service affects the life course (MacLean & Elder 2007; Settersten 2006), there is much that remains to be learned. It is critically important that we continue to follow multiple cohorts as they age so that it will be possible to conduct direct cohort comparisions. There is also a need for further research examining the impact of military service on the lives of women who serve, as well as the lives of those to whom veterans' lives are linked. Finally, as was the case with World War II, the Vietnam War, and the Gulf War, veterans returning from Iraq will face a unique set of challenges. It is important to document how they are faring and how current policies and programs are shaping their life course trajectories in the short- and long-term.

**SEE ALSO** Volume 1: *Elder, Glen H., Jr.;* Volume 2: *Careers; Employment, Adulthood.*

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## MILLS, C. WRIGHT
### *1916–1962*

C. Wright Mills was born on August 28 in Waco, Texas, and was raised in Texas. He earned his Ph.D. from the University of Wisconsin and taught at the University of Maryland and Columbia University. Mills was a public intellectual who was known for motorcycle riding and unconventional dress and for a manner that was consonant with his radical sociology. He used social analysis to shed light on the crises of his time, presenting his analyses in both academic and popular venues. A hero to student movements of the 1960s, Mills continues to be a model for academics who see their work as part of political struggles (Gitlin, 2000; Hayden, 2006). He died on March 20 in Nyack, New York.

*C. Wright Mills.* COLUMBIA COLLEGE TODAY.

During the 1950s there was a climate of optimism in American sociology, which was dominated by functionalists who argued that social institutions fulfill specific purposes, all for the general good. Mills's sociology, which was based on conflict theory, challenged that complacency. Although he drew from classic European social theorists such as Karl Marx and Max Weber, Mills had a uniquely American perspective. By orientation and training he rejected disciplinary boundaries (Gerth & Mills, 1953). Mills used case studies of labor leaders, white-collar workers, and the powerful ("elites") to understand the factors that limit people's motivation to work for change. He attempted to understand the conditions that create opportunities and constraints for individuals and institutions and the ways in which power is used.

From his studies of different population segments of the post–World War II United States, Mills developed a theory about the factors that influence the balance of power in a society. He argued that concentrations of power reduce choices for the larger public even as they advance the power of the select few at the top. In *The Power Elite* (1956), he claimed that the United States was controlled by interrelated elite groups in the government, military, and industry, each of which pursued

shared self-interested goals. The average American was duped by an illusion of well-being and minimal economic security. Popular culture, which was controlled by the elite, worked to mold a society of what Mills described in *White Collar* (1951) as "cheerful robots" (p. 233; see also Mills, 2000 [1959], pp. 169–176). Absorbed in the pursuit of personal happiness, cheerful robots were apathetic to the political and economic arrangements that limited their autonomy and circumscribed their choices. This depoliticized public included the American working class, which social theorists might expect to be the source of conflict and change.

Mills contended that the power elite, which relied on unchecked military and industrial growth to sustain itself, inevitably would cause a third world war. He did not predict the social and political upheaval of the 1960s, which contrasted with the complacency that made him despair of social change. He did, however, look to nations such as Cuba and the Soviet Union as models. Some claimed that the inaccuracy of Mills's doomsday predictions discredited his analysis. Mills, however, documented particular historical, economic, and social circumstances to understand mechanisms of power and agency. His complex theories included the idea that, under different circumstances, processes and outcomes would change.

Mills called for social theorists and laypeople to critique social institutions and their own choices, arguing that they must examine what people do rather than uncritically accept their words. Mills believed that most individuals, elites or otherwise, are not conscious of societal power dynamics. In *The Sociological Imagination* (2000 [1959]) he noted the difficulty of identifying connections between societal "issues" such as structural unemployment, and private "troubles" such as the loss of a job. In dynamic modern societies it can be difficult to see the historical and biographical circumstances that shape people. In his letters and autobiographical writings Mills acknowledged that those forces shaped him too (Mills with Mills, 2000).

Although Mills believed that the intersection of biography and history provides constraints and opportunities, neither can determine the future. Social analysts and ordinary people use their sociological imagination to transcend their private worlds and connect their personal experiences to the larger stage of history in the "hope to grasp what is going on in the world, and to understand what is happening in themselves as minute points of the intersections of biography and history within society" (Mills 2000 [1959], p. 7). Mills's perspective differs from social theories that focus on the individual as the locus of change or activity and those which focus primarily on the social milieu or institutions. His work affords neither one primacy and charges social theorists to investigate individual experience and the social environment as well as the reciprocal interplay between them. Mills's ideas were influential in the development of the life course perspective, which emphasizes the links between social forces and individual lives (Elder & Shanahan, 2006).

Mills's social theory has contributed significantly to an understanding of social processes and the interplay among individuals, institutions, and society. He encouraged a critical approach to power, a challenge to complacency, and the expansion of the sociological imagination.

**SEE ALSO** Volume 2: *Sociological Theories.*

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***Corey S. Shdaimah***

## MOTHERHOOD

Motherhood represents a distinct aspect of a woman's life course. The beginning of motherhood is defined by pregnancy and childbirth, but when it ends is less clear—a woman does not stop being a mother after her children are grown up. Historically in European and North American societies, motherhood was the final step toward adulthood, closely following marriage. Over the past century the place of motherhood in the life course has significantly changed and, at present, it varies widely. Increasing numbers of women are deciding not to become mothers, many women delay motherhood until later in adulthood, and many become mothers regardless of their marital status.

Mothers provide the vast majority of primary care to their children, and, although they mother in various familial and social structural contexts—married or single, within a nuclear or extended family, in relatively privileged or less-privileged social positions based on class, race, and sexuality—being a mother significantly defines and affects their social and economic positions for the rest of their lifetimes.

## SOCIAL ASPECTS OF MOTHERHOOD

Because of women's biological ability to bear children, it is conventionally expected that all women will become mothers. Women's femininity and gender identity are also reinforced by mothering. About 80% of American women become mothers during their reproductive lives. Mothers in the early 21st century, however, spend much less of their life course actively involved in mothering than did women in the past. The average woman spends less than one-seventh of her lifetime doing tasks such as nursing, diapering, or taking care of the everyday needs of a young child (Coltrane & Collins, 2001). The tasks of caring, nurturing, and protecting children are often referred to as *mothering*. They are usually—but not necessarily—performed by mothers; according to some theorists, men or non-mothers also perform mothering tasks when they take care of children (Doucet, 2006; Ruddick, 1995). Even so, motherhood is still seen as the primary purpose of a woman's existence and continues to define and affect women's lives.

Pointing to social, cultural, and historical variations in motherhood roles, norms, and expectations, social scientists argue that motherhood is socially based. The norms of motherhood and defining what a *good* mother is have historically varied and have been applied differentially according to a woman's social status. For example, in the 19th century the belief developed that mothers (rather than wet nurses) were best suited to take care of their babies. American society thus began to expect middle-class mothers to selflessly devote themselves to their children. At the same time, public campaigns, policy measures, and sterilization were used to discourage poor and minority women from becoming mothers at all. Such class differences continue to exist even in the 21st century; middle-class mothers are encouraged to devote as much time as possible to the care of their children, whereas working-class and poor mothers are expected to work outside of the home, leaving their children in the care of others so that they may provide income and even welfare benefits for their families.

The norms and expectations of present-day American motherhood have become more involved and demanding than ever before. The ideology of intensive mothering, as defined by Sharon Hays (1996), is a child-centered child-rearing approach that requires mothers to spend money, energy, and time to raise their children while following expert advice and being fully tuned in to their child's thinking and emotions. This set of social expectations has become the accepted definition of mainstream American motherhood and has spread from the middle class to other layers of society. Hays showed that intensive mothering is not necessary for the healthy development of children, as expert advice and treatment of children in the past often directly contradict intensive mothering methods, providing further evidence for the social foundations of the motherhood role.

Analysis of media images of mothers and motherhood since the 1970s suggests that the media helps to spread and reinforce the myth of perfect, enjoyable, and fulfilling motherhood, performed to the standards of intensive mothering. Described as *new momism*, the media creates "a set of ideals, norms, and practices ... that seem on the surface to celebrate the motherhood but which in reality promulgate standards of perfection that are beyond your reach" (Douglas & Michaels, 2004, p. 4). Both academic research and popular writing indicate that it is neither easy nor enjoyable for women to keep up with these expectations. New mothers quickly discover that they are not well-prepared for the reality of motherhood. They realize that the image of motherhood they had—being "brave, serene and all knowing" (Maushart, 1999, p. 2)—was just a mask covering the chaos and complexity of real life. New mothers thus have to deal not only with the social expectations of intensive mothering but also with the process of sorting out expectations from realities and adjusting to the latter. The stress of these adjustments, along with the demands of taking care of the new baby, may be a contributing factor in postpartum depression. Even during their later years as mothers, women with children tend to experience more distress and depression than non-mothers despite the joys and gratifications associated with parenting (Evenson & Simon, 2005).

## CHANGING PLACE OF MOTHERHOOD IN WOMEN'S LIFE COURSE: DEMOGRAPHIC TRENDS

Twenty-first century women become mothers at a different point in their life course and under different circumstances than was the case for previous generations. Changes in motherhood are closely related to overall changes in the American family structure and to the position of women in the larger society. Women's increasing education levels, and higher career aspirations and opportunities, and higher rates of labor force participation, as well as increasingly available and improving contraception, contribute to the

## MOMMY WARS/IMAGES OF MOTHERHOOD

Should mothers stay at home with their children or pursue careers and contribute to family income? This is the main question behind the *mommy wars*—a cultural debate about whether women who stay at home with their children or women who work outside of the home make better mothers. This debate has been played out in the media since the 1970s, with each camp arguing that their choice is right and that children of the mothers in the opposing camp suffer. However, maternal activists point out that working is a necessity rather than a choice for many mothers and that mothers often move between the worlds of family and work. They are asking the media to stop feeding the mommy wars and to focus instead on issues that unite all mothers, such as the implementation of family-friendly public policies, reliable child care, and affordable health care for all families.

changing significance of motherhood and result in changing demographic behavior.

One of the most obvious demographic changes characteristic of today's motherhood is the postponement or avoidance of motherhood. The proportion of women who remain childless nearly doubled between the 1970s and the 2000s. In the 1970s only 10% of women did not have children during their reproductive lives (defined by demographers as ending at age 44); by 2004, 19.3% of women between the ages of 40 and 44 years remained childless (Dye, 2005). Even though improved reproduction technologies and adoption offer women the possibility to become mothers after this age, this increase suggests that more women are postponing and avoiding motherhood than ever before.

Motherhood also occurs at a later stage of life for women who do become mothers, often in their late 20s and, increasingly, in their 30s. The average age of a first-time mother has increased from 21.4 years of age in 1970 to 24.9 in 2000 (Mathews & Hamilton, 2002). In 2004 about 45% of women between 25 and 29 years of age were childless (Dye, 2005).

Concurrent with the trend toward delayed motherhood, women tend to have fewer children than in the past. The average number of children an American woman bears in her lifetime has dropped from 3.5 children during the 1950s baby boom to about 2.1 in 2006 (Centers for Disease Control and Prevention, National Center for Health Statistics, 2007). Having fewer children allows mothers to devote more attention, energy, and resources to each child they have, as required by the ideology of intensive mothering, but it also allows women more time and opportunities to pursue other interests.

Motherhood has also become increasingly disconnected from another important life course transition: marriage. In the early 21st century, about one-third of children are born to women outside of marriage, and this proportion has been increasing. The proportion of childbearing outside of marriage is even higher for African American women, with almost two thirds of their children born outside of marriage compared to one-quarter of White women (Dye, 2005). This is a considerable change from the not-so-distant past of the 1950s, when having a child out of wedlock was quite rare and considered a scandalous, if not socially punishable, offense.

Having children outside of marriage does not necessarily mean that women raise their children without a father. The increasing prevalence of cohabitation—defined as living in a household with a sexual and romantic partner without marriage—has contributed to the increase in nonmarital childbearing. Women are more likely to become first-time mothers while cohabitating than while married. In 2002, 42% of first births were to cohabitating women, whereas only 29% were to married women (Downs, 2003). The trend toward choosing motherhood without marriage is documented both among middle-class women (Hertz, 2006) and poor women (Edin & Kefalas, 2003).

Statistics show that younger and less educated women are more likely to have children outside of marriage than are older women or women with higher levels of education. The proportion of unmarried mothers is highest among teenage mothers—88% of women under 20 were not married when their child was born (Dye, 2005). This stands in stark contrast to the 1950s, when teenage childbearing was at twice the current rate but the majority of young mothers were married.

The life-course stages of teenage mothers are organized differently than those of women who delay childbearing, mostly in respect to completing education and entering marriage. Despite the threat of possible negative outcomes—including lower rates of high school completion, lower incomes, difficulties obtaining and keeping jobs, and lower stability of later marriages—in communities characterized by low life aspirations, a dearth of access to well-paying, stable jobs, and high divorce rates, motherhood represents an alternative strategy for attaining adulthood and social status.

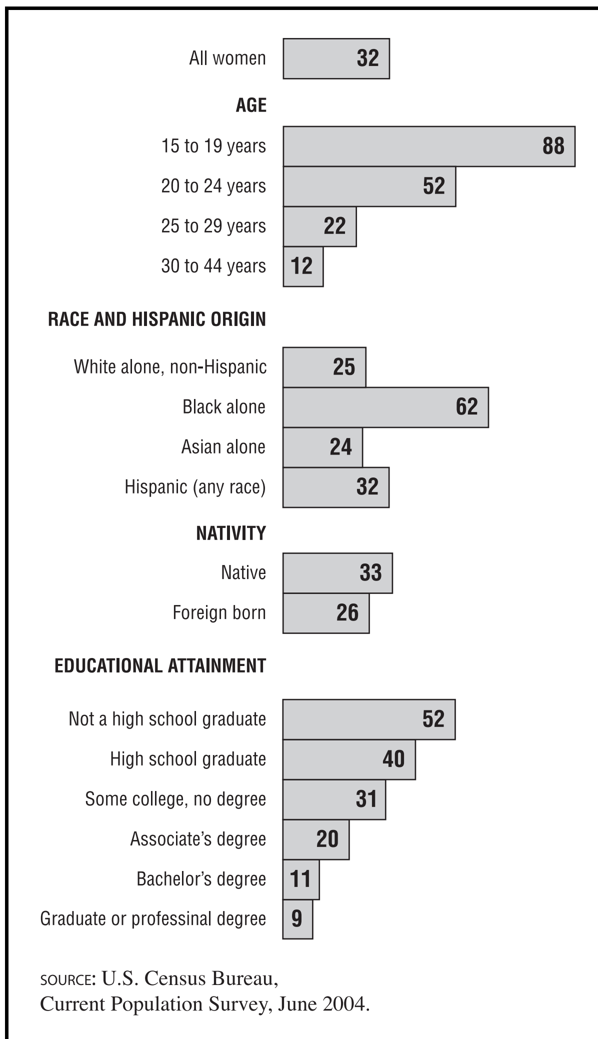


***Figure 1.*** *Nonmarital births by age, race, Hispanic origin, nativity, and education attainment, June 2004. Percent of births born in the preceding 12 months to women who were never married, divorced, or widowed.* CENGAGE LEARNING, GALE.

## ECONOMIC IMPACT OF MOTHERHOOD

Regardless of social background, motherhood has direct and indirect negative economic implications for women that persist through the life course. Although child care and mothering are often referred to as the most important jobs in the world, mothers receive minimal public support and no economic compensation for their work. The benefits of childrearing are diffuse and shared by the whole society, but mothers are more likely than fathers to carry the negative economic costs of having children as they are more likely to limit their work hours, take time out of the labor force to care for the child, or take jobs compatible with childrearing. Ann Crittenden (2001) referred to the overall impact of motherhood on women's socioeconomic status as *the price of motherhood*.

The economic price women pay to be mothers is most visible in the pay they receive for their work in the paid labor market. Full-time working women made about 81% of men's salary in 2006 (U.S. Bureau of Labor Statistics, 2007). Mothers earn less than women without children, earning 73 cents per a dollar earned by men for the same job, taking into account job-related experience and mother-friendly job characteristics. Researchers find that the first child exacts a 2% to 10% wage penalty and two or more children a 5% to 13% penalty, depending on the children's age and the mother's education and race (Anderson, Binder, & Krause, 2003; Budig & England, 2001; Waldfogel, 1997).

Mothers are also disadvantaged during the hiring process. According to one study, mothers are 79% less likely to get hired if they present the same experiences and resumes as non-mothers and are also offered significantly lower salaries than non-mothers (Correll et al., 2007). The motherhood penalty and hiring discrimination demonstrate that although the labor force has become more equal in the opportunities and pay available for men and women, policies that accommodate employees' family and caregiving responsibilities are insufficient.

Mothers' careers are often interrupted by the needs of their children, limiting their possibilities for career advancement, promotion, and enhanced income. Phyllis Moen and Shin-Kap Han (2001) described gendered career paths characterized as orderly or high-geared for men and intermittent, with delayed entry or steady part-time, for women. This type of career progression is sometimes referred to as the *mommy track*, characterized by slower career advancement but a better ability to combine work and family. Indeed, although the majority of mothers have paid jobs, most of them work less than full time. In 2002, 24.6% of mothers with children under age 18 stayed at home, 38.8% worked full time all year, and 36.7% worked part-time (Lovell, 2003). Part-time work is preferred by 60% of women with minor children (Pew Research Center, 2007), although it has economic disadvantages, such as lower pay and limited benefits. Part-time workers also often work almost full-time hours to maintain their position in the work organization.

Because of the difficulties in balancing work and family, women sometimes leave the workforce altogether. In a widely discussed article, Lisa Belkin (2003) suggested that professional mothers are increasingly leaving the workforce to take care of their children and choosing family over their careers. This is referred to as the *opt-out revolution*. Further research has demonstrated, however, that most of these mothers do not leave the workforce because they want to reestablish traditional family arrangements or have a desire to be full-time mothers as the media has suggested. Instead, they are pushed out from their jobs by inflexible workplaces

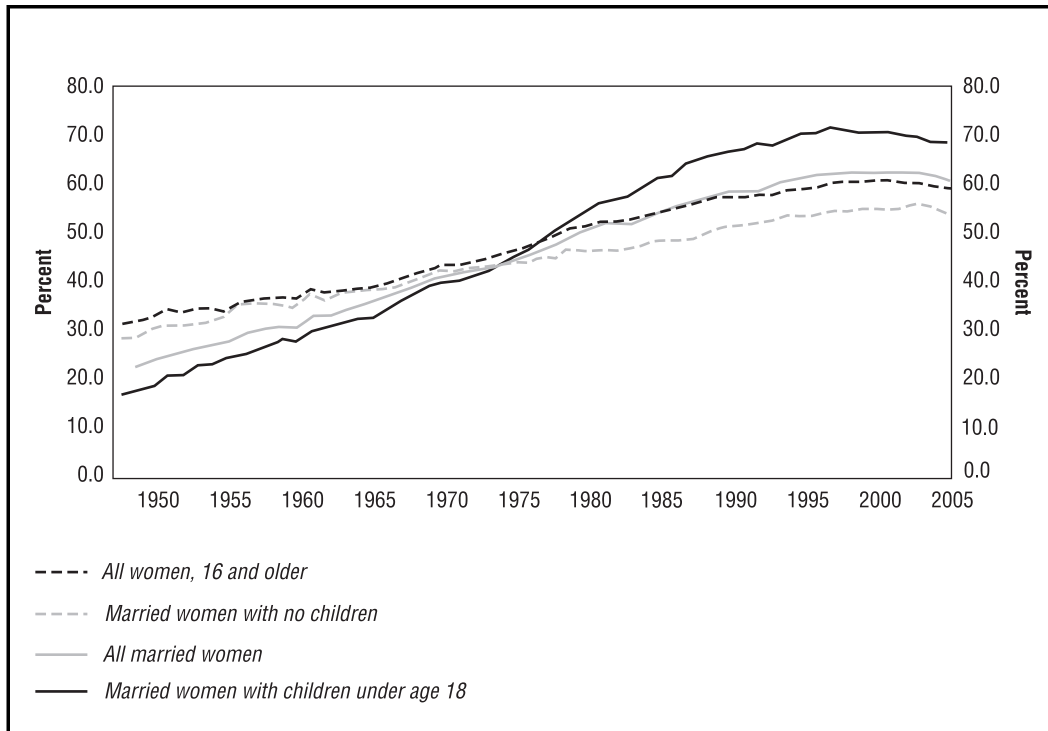


***Chart 1.*** *Labor force participation rates of women by marital status and presence of children, March 1948–2005.* CENGAGE LEARNING, GALE.

that make it difficult or impossible to combine work and motherhood.

Paid labor continues to be structured in a way that disadvantages all caregivers (not only mothers) who cannot perform as ideal workers (i.e., employees fully committed to their jobs and without family impediments to their performance; Williams, 2000). At the same time, cultural expectations for childrearing are still based on the idea that children are better off if cared for and raised by their parents than other caregivers. Therefore, most mothers are socially, culturally, and economically excluded from economically successful roles and forced to opt out or choose mommy track careers. Although women perceive what they do as a choice, it is a choice under the constraints of a social and economic system that is built on the assumption of a division of labor between caregiving and breadwinning. Such a choice is also available only to those who can afford to stay at home, as is clearly shown by the 1996 welfare reform requirements that insist poor mothers work outside of the home to provide for themselves and their families.

The price of motherhood and the economic impact of motherhood on women are not limited to the wage penalty and job discrimination. Indeed, after a divorce, women often slip into poverty because of their limited workforce participation while married, a division of gender roles in the family that is not reflected in the majority of divorce settlements, and their predominant post-divorce care of the children, whereas fathers usually improve their standard of living.

## MOTHERHOOD AND PUBLIC POLICY ISSUES

In the contemporary United States, raising children is still primarily considered the mother's responsibility. Comprehensive family-oriented public policies, common in most of the world, such as paid family leave after the birth of a baby and subsidized preschool education, are thus lacking. In fact, the United States is the only industrialized country without a policy that allows mothers to stay home with an infant and maintain an income for the family (some countries even provide paid leave for fathers). The current U.S. policy, the 1993 Family and Medical Leave Act (FMLA), provides unpaid leave to take care of a new baby or sick family member for up to 12 weeks to employees in companies with more than 50 employees. However, even eligible employees often cannot afford to take the unpaid leave. Individual states are therefore passing their own legislation to improve this federal policy.

Similarly, working parents are responsible for providing child care for their children before they achieve

school age, as there is no comprehensive, publicly funded preschool system in the United States. Finding good quality and affordable preschool and child care is often very stressful for mothers.

Social movement organizations have been advocating improvement of mothers' and caregivers' social and economic positions, attempting to bring these policy issues to the national consciousness and political debate. Among these are MomsRising.com, Mothers Ought to Have Equal Rights (MOTHERS), the National Association of Motherhood Centers, Mothers & More, Mothers Acting Up, the National Organization of Women (NOW), and many others. They argue that although mothering is a life-changing experience, it should not be a difficult one, much less one that leads to discrimination and poverty.

## DIRECTIONS FOR FUTURE RESEARCH

Motherhood and its economic and social value remain highly contested topics in American society. Although much more is known about motherhood and mothers than a few decades ago, changing social, political, economic, and cultural contexts create new challenges for women as they enter motherhood and combine it with other identities and roles. Future research will likely emphasize the diversity of maternal experiences, as women mother under different social, cultural, and economic conditions that are not always reflected in current research. The identities, ideologies, and meanings that women of various backgrounds give to their mothering experiences and the place of motherhood in their life courses are still to be examined in more detail. At the same time, similarities in women's experiences, the issues mothers face, and the prevalence of mainstream motherhood norms across social classes also need to be addressed.

Analyses of the economic implications of motherhood for women and their families are likely to be carried out in the light of new social policies and increased maternal and caregiving activism. Will the new social movements change the way mothers act and organize their family lives and impact the public and corporate family policies? Will this affect the way mothers position themselves in the work-family space? Research into combining work and family obligations will also gain a new dimension as new generations of women enter motherhood. How will these young women, who saw their own mothers juggle work and family obligations, incorporate their experiences into their lives? Will they continue the trend of delaying motherhood into later stages of their life course in order to establish their careers and devote themselves to motherhood afterward, or will they find a way to do both at the same time? Will they continue to follow the expectations and pressures of intensive mothering or will the social expectations on mothers be gradually replaced? There is also a lot to be learned about the long-term life-course implications of the choices previous generations of mothers made on their identities, health, family relations, and overall well-being.

**SEE ALSO** Volume 1: *Parenting Style; Transition to Parenthood;* Volume 2: *Childlessness; Fatherhood; Infertility; Noncustodial Parents.*

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***Ivana Brown***

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## NEIGHBORHOOD CONTEXT, ADULTHOOD

The concept of *neighborhood* refers to an individual's immediate residential community. Research linking characteristics of neighborhoods to adult outcomes reflects a long tradition of sociological research on the role social context has in shaping lives. Results of this research suggest that neighborhoods are more than simply places of residence; they also provide proximate access to opportunities for residents, including employment opportunities, social opportunities, and access to beneficial resources. Just as neighborhoods provide access to positive factors, however, neighborhoods can also negatively affect residents through exposure to crime, social and physical disorder, and environmental and health risks.

### THEORETICAL FOUNDATIONS OF NEIGHBORHOOD RESEARCH

The idea of neighborhoods as important social contexts has its origins in the human ecology perspective of the Chicago School of sociology (Park, Burgess, & McKenzie, 1925), which emphasized the interaction between humans and their environments. A key insight of this perspective was that characteristics of residential communities can affect residents' behaviors and beliefs above and beyond their own personal characteristics. In particular, Shaw and McKay (1942) found that neighborhoods with certain characteristics showed higher rates of juvenile delinquency and infant mortality, regardless of the race or ethnic background of the groups living there. Shaw and McKay's *social disorganization* approach focused on three neighborhood characteristics: economic disadvantage, racial and ethnic heterogeneity, and residential instability. These elements were thought to erode a community's capacity for social organization, leading to the cultural transmission of crime and risky behavior with eventual effects on neighborhood crime rates and residents' health.

This insight spurred an interest in the neighborhood as a meaningful locus of intervention: If the problems experienced in disadvantaged neighborhoods were not attributable to the types of people who lived in these neighborhoods, efforts directed at the neighborhood should lift the fortunes of those living there. However, ambitious efforts such as Robert Park's Chicago Area Study, in which he divided the city into a set of community areas and targeted troubled areas for intervention, yielded mixed results (Kobrin, 1959). As a result, by the middle of the 20th century sociological interest in neighborhood research waned.

However, several factors led to a resurgence of interest in neighborhoods in the latter part of the 20th century. First, Kornhauser (1978) critically evaluated and reformulated Shaw and McKay's social disorganization theory, deemphasizing the cultural transmission process, and instead emphasizing the key role of neighborhood social organization. Second, researchers became interested in the causes of observed increases in the spatial concentration of poverty in the United States. By linking the neighborhood to the structure of U.S. society, these researchers addressed a weakness in Shaw and McKay's (1942) work—its inattention to the larger, social structural forces that produced differences in neighborhoods. For example, Massey and Denton (1993) found that the spatial (i.e., geographic) concentration of poverty was intertwined with persistent patterns of residential segregation by race that remained

long after the practices that produced them were outlawed (such as *red-lining* primarily minority neighborhoods to indicate their undesirability for mortgage loans). Wilson (1987, 1996) argued that the impact of segregation was compounded by economic changes that eroded job opportunities for low-skilled workers in urban settings, leading to neighborhood decline and the concentration of economic disadvantage in particular urban neighborhoods (Wilson, 1987, 1996). Residents of these neighborhoods were described by Wilson (1996) as *socially isolated*—rooted in their neighborhood contexts, but isolated from mainstream social and employment opportunities.

More recent research on the importance of neighborhood contexts builds on Wilson's (1987, 1996) work, and considers the mechanisms that *link* neighborhood economic, social, and demographic characteristics to neighborhood levels of crime, health problems, and other social ills, as well as the well-being of individual residents (Jargowsky, 1997; Sampson, Morenoff, & Gannon-Rowley, 2002). Consistent with Kornhauser's (1978) reformulation of social disorganization theory, researchers separately examine processes of neighborhood social organization and neighborhood cultural transmission.

## LINKS BETWEEN NEIGHBORHOOD CHARACTERISTICS AND OUTCOMES

**Social Organization** Research on the links between neighborhood social organization and neighborhood and individual outcomes considers how characteristics of neighborhoods can attenuate or promote a community's capacity to regulate the behavior of its residents (Kornhauser, 1978). This research draws on the concept of social capital, the capacity for action on behalf of an individual or group that inheres through networks of social relationships (Bourdieu, 1986; Coleman, 1990). Although social capital is thought of as a good that may be employed for positive goals, it can also have a downside—it may be used, for example, to reinforce social advantage among some groups, to the exclusion of others (Portes, 1988).

Much research on the role of social capital has examined its importance for health and well-being; that is, the way social ties can provide social supports and opportunities to engage in healthy (and health risk) behaviors, as well as the capacity for action that can be employed to lure health-promoting institutions (Lochner, Kawachi, Brennan, & Buka, 2003; Carpiano, 2007). For example, Lochner, Kawachi, Brennan, and Buka (2003) found positive relationships between low levels of social capital and neighborhood total mortality rates, as well as rates of death from cardiovascular disease. Carpiano (2007), however, found that social support was, surprisingly, positively associated with health risk behaviors such as smoking and binge drinking, although informal social control was negatively associated with such behaviors. This research highlights the importance of goal-oriented aspects of social capital—or the ability of a community to employ its social ties for the collective good—and the ways in which social ties supply opportunities for both healthy and health risk behaviors.

**Collective Efficacy** One important application of social capital theory to the neighborhood context is the concept of *collective efficacy* (Sampson, Raudenbush, & Earls, 1997) that is defined as "the linkage of mutual trust and the willingness to intervene for the common good" (p. 919). Collective efficacy is thus a social good that helps maintain neighborhood order through informal social control. Collective efficacy is goal oriented, and incorporates a neighborhood's capacity for prosocial action.

The structural and demographic characteristics of disadvantaged neighborhoods identified by Shaw and McKay (1942) and by Wilson (1996) serve to limit a community's capacity to achieve collective efficacy, with effects on neighborhood social conditions (e.g., community rates of crime or health risk behaviors) as well as individual outcomes (e.g., victimization or participation in health risk behaviors). Residents of neighborhoods that are residentially unstable, for example, will have difficulty recognizing shared values and may hesitate to intervene in the event of trouble because they cannot be assured that their views are shared by others in the community. Similarly, in some racially and ethnically heterogeneous neighborhoods, hostility among groups may hinder their ability to band together in support of neighborhood goals; moreover, they may not agree on goals for the neighborhood.

Aspects of disadvantage also potentially inhibit neighborhood collective efficacy. In economically disadvantaged neighborhoods, the individual challenges faced by poor residents may not permit residents to engage meaningfully in forms of neighborhood social control. Further, competing allegiances to law-abiding residents and those who are engaged in illegal enterprises, such as the sale of drugs, may restrict residents' willingness to get involved when they recognize illicit activity (Pattillo-McCoy, 1999). Finally, neighborhoods with a high proportion of single-parent families have fewer adult residents available for shared collective supervision of the neighborhood environment.

The emphasis on social control in the concept of collective efficacy has led to a research focus on its effects on child and adolescent outcomes. However, researchers have also found evidence for the importance of collective efficacy for a variety of neighborhood and adult outcomes. Sampson, Raudenbush, and Earls (1997) found that neighborhoods with higher levels of collective efficacy had lower rates of violent crime. Collective efficacy also has been found to be negatively associated with intimate homicide rates and nonlethal partner violence (Browning, 2002).

***Neighborhood at War.*** *North Las Vegas police officers handcuff a suspected gang member during a patrol of a North Las Vegas neighborhood.* AP IMAGES.

Finally, collective efficacy has been found to be positively associated with self-rated physical health (Browning & Cagney, 2002), and negatively associated with obesity (Cohen, Finch, Bower, & Sastry, 2006).

**Institutional Resources and Environmental Hazards** Researchers have also identified the importance of social capital as a means to attract and retain institutional resources that are beneficial for neighborhood residents (Elliott, Wilson, Huizinga, & Sampson, 1996). Neighborhoods that are socially organized and able to exploit social ties to decision makers outside the neighborhood may be able to influence the placement of desirable institutions (e.g., health care facilities, community centers, police and fire substations) within the neighborhood. As a result of the proximity of these desirable institutions, the residents' sense of well-being may increase (Leventhal & Brooks-Gunn, 2001). In addition, residents of socially organized neighborhoods may be better able to work together to reduce hazards and risks (Leventhal & Brooks-Gunn, 2001), which include physical disorder (e.g., broken glass, litter, biohazards), social disorder (e.g., public intoxication, prostitution), or the placement and regulation of harmful institutions in or near the neighborhood (industries that pollute).

Skogan (1990) found a positive relationship between aspects of physical disorder and neighborhood levels of crime. Sampson and Raudenbush (1999) found that, even though physical disorder and neighborhood crime are correlated, the relationship is not causal; rather, both stem from the same set of predictors related to a given neighborhood's high levels of concentrated poverty and low levels of collective efficacy. However, the effects of physical disorder may be perceived through its impact on residents' fear and the effects of that fear on residents' health and well-being (Ross & Mirowsky, 2001). Finally, Altschuler, Somkin, and Adler (2004) examined the effect of neighborhood amenities and liabilities (e.g., pollution, available food stores, effective municipal services) on resident self-rated health. Their findings indicated the importance of goal-oriented social capital for the attraction of neighborhood amenities and the elimination of liabilities.

**Routine Activities and Opportunities for Crime** Neighborhood social organization may also affect individual opportunities for participation in crime and problem behavior. Cohen and Felson (1979) argued that most societally deviant (i.e., transgressive) behavior, including crime, is a function of an individual's routine, everyday activities. This approach emphasized the unplanned nature of much criminal activity. Using this perspective, neighborhoods may experience increased crime and problem behavior if they have few *guardians*, that is, people who keep watch over the activities of other people and over public and

private property; and many vulnerable *targets*, or people who are susceptible to victimization and property that is unsecured or isolated. Although the routine activities framework focuses on deficits in social organization, it shares an emphasis on opportunity with theories of cultural transmission.

**Cultural Transmission** Differential social organization approaches emphasize the *absence* of social organization and forms of informal social control as key determinants of crime and risk behavior. In contrast, cultural transmission perspectives emphasize the *presence* of problematic behaviors and attitudes in some neighborhoods, and consider how these features also structure residents' opportunities for participation in crime and health risk behavior. These approaches are also called *subcultural* or *epidemic* approaches (Anderson 1990; Crane 1991), and are rooted in early theories of crime and gang delinquency (Short & Strodtbeck, 1965; Cloward & Ohlin, 1960; Smith & Jarjoura, 1988). These perspectives argue that the proliferation of problem behaviors and crime in a neighborhood provides an illegitimate opportunity structure in opposition to mainstream society. In disadvantaged neighborhoods, these illegitimate opportunity structures may present an alternative path for residents who are blocked from mainstream opportunities for success. Ethnographic researchers who studied the lives of adults in disadvantaged settings found evidence to support the cultural transmission of acquired styles that may promote risk or criminal behavior (Liebow, 1967; Duneier, 1992; Anderson, 1978, 1990).

## ISSUES OF DEFINITION, MEASUREMENT, AND ANALYSIS

Several methodological considerations arise when examining neighborhood effects. First is the definition of *neighborhood* itself. Researchers have employed different definitions of this term, such as administrative boundaries (census tracts or blocks) (Sastry, Ghosh-Dastidar, Adams, & Pebley, 2006; Hipp, 2007); areas set off by streets, railroad tracks, and other ecological boundaries (Sampson, Raudenbush, & Earls, 1997; Grannis, 1998); social networks (Wellman & Leighton, 1979); and residents' subjective definitions of their sociospatial neighborhood (Lee & Campbell, 1997).

A second consideration is selection bias. The same characteristics that lead individuals to select certain neighborhoods in which to live may also influence their own outcomes. For example, individuals who have a propensity or desire to participate in crime or illicit behavior may seek out contexts that facilitate (or do not inhibit) such criminal or illicit behavior (Stark, 1987). As a result, observed neighborhood effects may be attributable instead to the aggregation of these unmeasured resident characteristics (Duncan, Connell, & Klebanov, 1997). Researchers attempt to address this issue by employing sophisticated statistical models to adjust for individual characteristics associated with neighborhood selection. An alternative way of dealing with selection is to use data from a quasiexperiment in which people are assigned at random to neighborhoods. Such data usually come from social programs, for example, the "Moving to Opportunity" (MTO) project, sponsored by the U.S. Department of Housing and Urban Development, in which some residents of disadvantaged neighborhoods were given housing vouchers to live in more affluent neighborhoods (Kling, Liebman, Katz, & Sanbonmatsu, 2004).

## THE FUTURE OF RESEARCH ON NEIGHBORHOOD EFFECTS ON ADULT OUTCOMES

To date, research on neighborhoods has largely focused on neighborhood level outcomes or children, adolescents, and the elderly, who may have the greatest exposure to the residential neighborhood. In contrast, adults with jobs visit a variety of settings in a given day. They may work outside their neighborhoods, shop outside their neighborhoods, and visit with friends in distant communities. A new direction in research takes into consideration these less geographically rooted existences of adults, and the potential impact of multiple contexts on individual and neighborhood outcomes. For example, Morenoff, Sampson, and Raudenbush (2001) examined spatial interdependencies as determinants of neighborhood variation in homicide rates. Mears and Bhati (2006) examined the social influence of neighborhoods to which residents shared social ties. Using ethnographic data, Pattillo-McCoy (1999) considered the social influence of adjacent neighborhoods on resident outcomes.

More recently, researchers have melded perspectives from geography, sociology, and statistics to consider the importance of individual residents' *activity spaces*, or the potential impact of the characteristics of places residents visit regularly, as well as the aggregate activity space of a neighborhood—the collective span of its residents' activity spaces (Kwan, Peterson, Browning, Burrington, Calder, & Krivo, 2008). These new approaches envision the relationships between adult residents and spatial contexts as dynamic, and move the direction of neighborhood research beyond a narrow, residence-based conception of the neighborhood.

A second new area of research examines neighborhood effects in settings outside the United States. Zhang, Messner, & Liu (2007), for example, who are conducting research in China, are applying collective efficacy theory to residential burglary and theft outcomes there. Wacquant (2007) conducted a study using both qualitative and quantitative data to consider urban social marginality in both the United States and France. Efforts such as these will yield important information about the applicability of theories based on data from the United States in an international context.

Future research on neighborhood effects will be facilitated by recent improvements in both statistical software and survey design. First, researchers are able to account for the clustering of residents within neighborhoods through the use of multilevel statistical models (Raudenbush & Bryk, 2002). Second, surveys of large metropolitan areas, such as the Project on Human Development in Chicago Neighborhoods (PHDCN) and the Los Angeles Family and Neighborhood Survey (LA FANS), have been specifically designed to examine the effects of sociospatial contexts on individual residents (Earls, Raudenbush, Reiss, & Sampson, 2002; Sastry, Ghosh-Dastidar, Adams, & Pebley, 2006). Third, researchers have employed methods of systematic social observation (SSO) to capture both objective and subjective aspects of neighborhood contexts. PHDCN researchers videotaped activities in Chicago neighborhoods in the course of their study and reviewed the tapes to code the extent of physical and social disorder in the neighborhoods (Sampson & Raudenbush, 1999).

In sum, neighborhood effects research helps policymakers understand how neighborhoods can have "good" or "bad" influences on the life chances and outcomes of their adult residents. Detrimental aspects of neighborhood environments are of great concern because they can compound the effects of family poverty on resident outcomes. Programs aimed at reducing the geographic concentration of disadvantage, and community-based efforts to build social cohesion and trust among neighborhood residents, may increase health and well-being, particularly among those residing in urban contexts. For example, the MTO study allows policymakers to assess the potential of voucher programs for reducing the geographic concentration of inequality and increasing access to institutional resources. Other potential interventions include increasing institutional resources within disadvantaged neighborhoods, and reducing the extent to which residents of these neighborhoods are exposed to environmental hazards, and physical and social disorder. An increased understanding of the mechanisms that lead to the spatial concentration of economic disadvantage, crime, poor health, and other social ills, is an important step toward addressing these problems.

**SEE ALSO** Volume 1: *Neighborhood Context, Childhood and Adolescence;* Volume 2: *Home Ownership/ Housing; Residential Mobility, Adulthood; Segregation, Residential; Social Integration/Isolation, Adulthood;* Volume 3: *Neighborhood Context, Later Life.*

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## NONCUSTODIAL PARENTS

A noncustodial parent is a parent who is legally responsible for the support of a dependent minor child and who does not live in the same household as the child. The terms *nonresident parent* and *noncustodial parent* are often used interchangeably. Noncustodial parents may have joint legal custody of their children, but the children's primary residence is with the other parent. The two primary paths to noncustodial parenthood include (a) births that occur outside of a union to parents who are not married or living together, and where one parent, almost always the father, does not live with the child; and (b) noncustodial parenthood resulting from divorce or separation, after which the children live primarily with one parent. The latter may result from the break up of cohabiting unions as well as marriages.

Becoming a noncustodial parent has profound consequences for the adult life course. The transition to parenthood is a vastly different experience when it occurs in the context of not living with the child and the other parent, as when births occur outside of a union. Unmarried, noncustodial parents (most often fathers in this circumstance) will face severe challenges in forming and maintaining close relationships with their children. For example, relationship difficulties with the other parent are likely to constrict noncustodial parents' access to their children.

Noncustodial parenthood following divorce engenders experiences of separation and loss, the possibility of damaging legal battles, and increased ambiguity in the parental role when not residing with children. Often divorce is only the beginning of a series of life-altering transitions for the noncustodial parent, including changes of residence, reduced socioeconomic status, possible new romantic relationships and union formation, and additional childbearing with a new partner. Each of these transitions has implications for relationships with nonresident children. Thus, becoming a noncustodial parent may have a lifelong influence on the quality of a parent's ties to children and on intergenerational relationships in later life.

## TRENDS IN NONCUSTODIAL PARENTHOOD

Divorce remains the primary cause of noncustodial parenthood. Estimates by demographers show that about half of all marriages will end in divorce, although the divorce rate has leveled off in the early 21st century. (Raley & Bumpass, 2003). An estimated 47% of White women's and 70% of Black women's marriages will end in divorce. Although mothers typically have physical custody of children following divorce, a growing proportion of fathers have full custody (10%) or shared custody (15% to 20%; Coley, 2001). Thus, there has been a substantial increase in the number of noncustodial mothers in the United States. Marjorie Gunnoe and Eileen Hetherington (2004) estimated that there were 1.2 million noncustodial mothers in the United States in the 1980s, with the numbers increasing during the 1990s. Data from the 2005 and 2006 Current Population Surveys show that about 9.3% of U.S. children under the age of 18 were not living with their biological mother (about 6.8 million children). Only about half of these children were living with their father, whereas the remaining half lived with neither biological parent.

Nonmarital childbearing is a rising cause of noncustodial parenthood in the United States. Since the late 1970s, nonmarital births more than tripled for White women ages 20 to 39 and increased by one-third for Black women (Gray, Stockard, & Stone, 2006). Currently about one-third of all births (and two-thirds of Black births) in the United States occur outside of marriage. In assessing nonmarital childbearing and its consequences, it is critical to distinguish between births to parents not in a union and births to (unmarried) cohabiting couples. About 40% of nonmarital births are to women who are cohabiting with the baby's father (Woo & Raley, 2005). Thus, in addition to divorce, the break up of cohabiting unions may also lead to noncustodial parenthood.

National survey data from 2002 show that about 40% of American men ages 15 to 44 had fathered a child outside of marriage, with rates higher for Hispanic (50%) and African American (74%) men (Nock, 2007); this included men who were cohabiting with the mother and were therefore resident parents, at least initially. However, national surveys may miss millions of unmarried, nonresident fathers who are not in the household population and difficult to recruit into research studies. Compared to resident fathers, nonresident fathers tend to be younger; have lower levels of schooling, employment, income, and assets; and are more likely to have substance abuse problems (Nelson, 2004). Nearly one-quarter of nonresident fathers are below the poverty line.

## RESEARCH ON NONCUSTODIAL PARENTHOOD

The vast majority of empirical studies in this area focus on noncustodial fathers. (The few studies on noncustodial mothers are discussed separately.) Research has shown consistently that noncustodial fathers are less involved with their children than resident, custodial fathers. Fathers after divorce may act more like visitors than parents, emphasizing leisure time with children rather than parenting. Living apart from children because of divorce or nonmarital birth makes it more difficult for men to provide financial and social capital to their offspring. Men in separate households have less income to share with children and have more difficulty in being active parents or active participants in their children's lives. National survey data in the United States show that from 25% to 50% of minor children almost never see their noncustodial fathers, whereas about one-fourth to one-third are in frequent contact with them (Nelson, 2004). Children's contact with noncustodial fathers tends to fade over time. Contact rates may vary across countries. An Israeli study found high levels of father involvement with adolescent children 6 years after divorce (Mandel & Sharlin, 2006). In measuring noncustodial father involvement, the informant matters. Mothers consistently report lower levels of involvement than do the fathers themselves. Interparental conflict leads to greater discrepancies between mothers' and fathers' reports.

To what extent is noncustodial father involvement related to a child's long-term well-being? Research on this linkage has produced mixed results. The clearest findings are

that father involvement enhances a child's cognitive development and educational attainment (Coley, 2001), whereas the evidence that fathers affect children's socioemotional development is weak. Analysis of national survey data with children ages 5 to 11 show that positive father–child relationships (e.g., warm, supportive, and responsive fathering behaviors) had modest, negative associations with adolescent internalizing and externalizing problems (King & Sobolewski, 2006). However, a child's relationship with the custodial mother had stronger linkages to well-being. Other research by Valarie King (2006) supported the *primacy of residence* hypothesis, which assumes that the most influential people on an adolescent's well-being are the people with whom he or she lives. Adolescents whose custodial mother remarried benefited from having close relationships with stepfathers and nonresident biological fathers, but relationships with stepfathers appeared to be more influential than relationships with biological fathers. More adolescents reported feeling close to stepfathers (61%) than to biological fathers (41%).

Contact frequency alone is not strongly or consistently associated with a child's adjustment or development. What matters most is what noncustodial fathers do with their children when they spend time together. When noncustodial parents engage in authoritative parenting with their offspring, and when they provide emotional and material support, they likely will contribute to a child's well-being. Contact is a necessary but not sufficient condition for strong relationships between noncustodial fathers and children. More contact leads to more support from fathers to children and more actual parenting as opposed to shared leisure time.

## PREDICTORS OF NONCUSTODIAL FATHER INVOLVEMENT

**Divorce Versus Nonmarital Birth** Children born outside of marriage have less frequent contact with and are less close to noncustodial fathers than children who experienced their parents' divorce. About half of unmarried noncustodial fathers have regular contact in the first years of their child's life, but this drops to about one-third when children are adolescents (Coley, 2001). Laura Argys and Helen Peters (2001) estimated that about 28% of adolescents ages 12 to 16 had weekly contact with nonresident fathers when parents were divorced, but less than 20% had weekly contact if parents had never married. More than 80% of the children of divorced parents had at least one contact with their noncustodial father over the past year, compared to only 57% of the children with unmarried fathers.

**Custody Agreement and Payment of Child Support** Having joint legal custody has been linked to a noncustodial fathers involvement with and feelings of closeness to his children, compared to fathers without legal custody. Fathers who are more involved with their children prior to divorce are more likely to share custody afterward. Joint legal custody gives fathers an equal say with mothers in decisions regarding the child. Having joint physical custody, whereby children split time between the two parental households, promotes involvement. It is difficult for men to establish and maintain an active father role based on visitation only and without daily involvement with the children. Men may feel they have lost their children because of unfair treatment by the legal system.

Rates of child-support payment by noncustodial fathers are low. About 60% of eligible families have a legal child-support award; among those with a legal award, about 20% of children receive all the financial support they are entitled to (Coley, 2001). Only 13% of unmarried fathers pay formal child support, although some offer informal support by providing goods and services for the child (McLanahan & Carlson, 2004). The longer a father is absent from the home, the less likely he is to pay child support. Nonpayment of mandated child support may weaken a father's connection to his children, resulting in lower levels of visiting the children and less influence over childrearing decisions. Mothers who do not receive mandated child support may impede men's access to their children.

**The Coparental Relationship** One of the most important barriers to noncustodial father involvement is a poor coparental relationship with the mother. The coparental relationship refers to the ability of the custodial and noncustodial parent to cooperate in childrearing. The coparental relationship tends to deteriorate over time (after the divorce or nonmarital birth), leading to disengagement and a decreased role for fathers in childrearing and decision making about the children. Cooperative coparenting is not common. In a nationally representative sample, about two-thirds of the custodial mothers reported that the noncustodial father had no influence on childrearing decisions (Sobolewski & King, 2005). A cooperative coparental relationship facilitates contact between the noncustodial parent and children, leading to stronger father–child relationships and more responsive fathering and has been linked to a higher probability of joint custody. Conflict between the parents deters men's involvement with their children and makes it harder for them to parent effectively. The most common pattern of nonresident fathering combines nonauthoritative parenting with low levels of interparental cooperation.

**Family Composition and Transitions** Research has shown that the noncustodial father's remarriage complicates the paternal role and leads to a reduction in contact with his nonresident children. A father's additional childbearing also

leads to a drop in visits with nonresident children, as the father may appear to embrace a new set of biological children and concern himself less with his children from previous marriages. The custodial parent's remarriage also may impact the noncustodial parent. When children acquire a stepparent, contact with the noncustodial parent declines.

**Fathers' Education and Socioeconomic Status** Noncustodial father–child contact is lower in poorer families. Based on research with unmarried fathers, Sara McLanahan and Marcia Carlson (2004) concluded that the male breadwinner role continues to be central to father–child relations. When men are not able to fulfill the breadwinner role for their children, they are more likely to withdraw. Data from a nationally representative sample of adolescents show clear linkages between a noncustodial father's education and their involvement with children (King, Harris, & Heard, 2004). Education was the most influential factor in explaining racial or ethnic differences in father involvement. Lower involvement among Black and Hispanic fathers (compared to White fathers) was explained by lower education levels and a higher probability of having nonmarital births. Education also differentiated the involvement of White fathers. The more educated White fathers (those who attained more than a high school degree) had the highest involvement levels of any ethnic or socioeconomic group, whereas less educated White fathers had the lowest involvement. The work migration of fathers in Hispanic families reduced father involvement in Mexican, Central, and South American families.

**Child Gender** Father involvement does not appear to vary greatly by the child's gender, although boys have reported somewhat higher involvement with noncustodial fathers than girls (King et al., 2004).

## NONCUSTODIAL MOTHERS

The proportion of noncustodial parents who are women has grown in the decades leading up to the 21st century. Nonetheless, research has focused almost exclusively on noncustodial fathers, and relatively little is known about women who occupy this role. This is the largest gap in research concerning noncustodial parenthood. Evidence suggests that sole father custody after divorce is more likely when mothers struggle to fulfill the maternal role because of personal problems (the maternal deficit model) and when mothers enter a new romantic relationship immediately upon separation while fathers remain unattached.

Mothers relinquishing custody of minor children is often viewed as deviant or abnormal. This custody arrangement violates cultural expectations of fathers as breadwinners and mothers as nurturers. Catalina Herrerías (1995) administered a life history questionnaire and clinical assessments to 130 noncustodial mothers. About 75% of these noncustodial mothers voluntarily gave up custody. Their reasons centered on financial considerations, emotional problems, the threat of a legal custody fight, and having a destructive relationship with the father. Although nearly all the mothers in this sample maintained connections to their children, the societal disapproval they experienced led the women to have negative self-perceptions as mothers. Research in the United States suggests that a noncustodial mother's parenting is more intense and of higher quality than that of noncustodial fathers. Susan Stewart (1999) reported in a national survey that noncustodial mothers were as likely as noncustodial fathers to have face-to-face contact with their children. The noncustodial mothers, however, had significantly higher levels of telephone and letter contact with their children. In contrast to noncustodial fathers, whether or not the noncustodial mothers paid child support did not affect their social contact with children. Noncustodial mothers are more likely than noncustodial fathers to perceive a child support order as fair.

Gunnoe and Hetherington (2004) noted that traditional sex roles encourage mothers more so than fathers to be loving toward and responsible for children. In their research with adolescents, they found that a significantly higher percentage of offspring with noncustodial fathers (52%) had no contact with their noncustodial parent than offspring with noncustodial mothers (31%). Noncustodial mothers exerted a more positive influence on adolescent adjustment than did noncustodial fathers, providing greater social support, engaging in more communication, and knowing more about the children than did noncustodial fathers.

## POLICY AND SOCIAL ISSUES

One of the central policy issues of noncustodial parenthood is how child-support awards and their enforcement impact the involvement of noncustodial parents with their children. The majority of noncustodial fathers, especially poor, unmarried fathers, pay no child support at all. Has the stepped-up enforcement of child support orders, including garnishing the wages of parents delinquent in their payments, created a disincentive or barrier to parents in maintaining connections to nonresident children? Men often perceive the child-support order as unfair and are less likely to make the payments when they think the legal system has not been just. One study (Lin & McLanahan, 2007) showed that custodial mothers see paternal obligations and rights as linked and feel that a father's visitation and decision-making rights should be conditional on payment of child support. Men who cannot or will not pay may feel cut off from their paternal role. One family legal scholar has proposed legally requiring nonresident parents to have contact with their

children regardless of their ability to pay child support. The aim is to create a norm of involvement for noncustodial parents that is not tied to the economic support of their children. It is not clear whether this controversial proposal will garner support among policy makers.

Rebekah Coley (2001) described the lack of societal norms about the role and responsibilities of noncustodial parents, especially fathers. How do the role expectations for noncustodial parents change as children grow older, when the custodial or noncustodial parent remarries, or when either parent has children with a new partner? Similar to Andrew Cherlin's (1978) description of remarriage, noncustodial parenthood can be viewed as an incomplete institution that lacks clear social and legal guidelines for role performance. The lack of societal expectations for continued involvement with children may make it easier for noncustodial parents to grow less responsible and responsive to their offspring.

A study conducted by William Marsiglio and Ramon Hinojosa (2007) raised the intriguing possibility that the remarriage of the custodial parent could serve to help rather than hinder a noncustodial father's involvement with their children. Based on qualitative research with a broad-based sample of stepfathers, Marsiglio and Hinojosa found that, although many stepfathers have strained relations with the nonresident biological fathers, there are also many cases in which stepfathers seek to facilitate and support the biological father's relationships with his nonresident children. These stepfathers acted as allies to the noncustodial father and developed a cooperative style of interaction. This study offers the possibility that interventions with remarried families could be developed to help stepparents become facilitators of strong connections between children and noncustodial parents.

**SEE ALSO** Volume 1: *Child Custody and Support; Family and Household Structure, Childhood and Adolescence;* Volume 2: *Cohabitation; Divorce and Separation; Family and Household Structure, Adulthood; Fatherhood; Motherhood.*

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***William S. Aqulino***

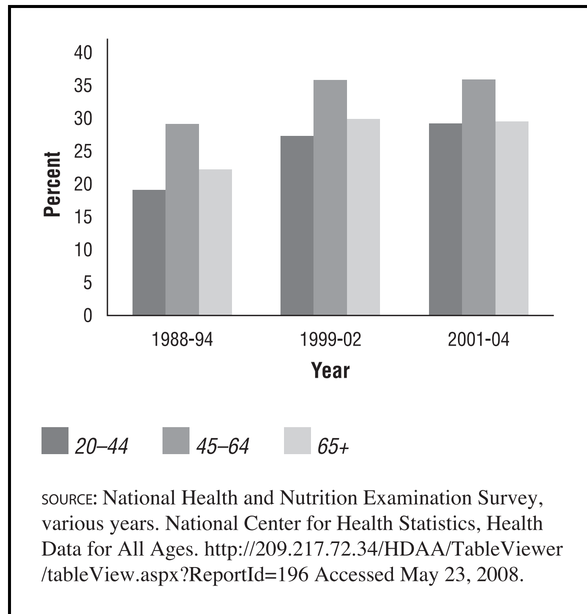
# O

## OBESITY, ADULT

The world's population is becoming increasingly overweight. Currently more than 1 billion adults are overweight, and at least 300 million of them are clinically obese (WHO 2008). Obesity is usually measured by the Body Mass Index (BMI), calculated as weight (in kilograms) divided by height (in meters squared). This measure is considered an indicator of body fat. The use of a standard measure is useful for screening patients, for public health interests, and for comparison across time and countries. The National Heart, Lung, and Blood Institute (NHLBI) issued the first federal U.S. guidelines on the evaluation and treatment of obesity in which they adopted the definitions of *overweight,* defined by a BMI of 25 to 29.9 kg/m$^2$, and *obesity*, defined by a BMI of 30 kg/m$^2$ or greater. Within the category of obesity further distinctions are made between *class I obesity*, BMI between 30 and 35; *class II obesity*, BMI between 35 and 40; and *class III obesity*, BMI exceeding 40. These guidelines are consistent with those adopted by the World Health Organization (2000) and used in international studies.

### TRENDS AND DIFFERENTIALS IN OBESITY

In nearly every nation the proportion of the population considered overweight has increased over the past two decades. This increase in body size is particularly evident in the United States. The proportion of the American population that is overweight and obese has risen dramatically for all age groups, although there is evidence that this trend may be slowing. Between 1960 and 2004, the proportion of adult men who were overweight rose from 50% to 71%, while the proportion of women who were overweight rose from 40% to more than 62%. The percentage of men who were obese rose from 10% to 31%, and the proportion of women who were obese rose from 15% to about 33% in the same 44-year period (Ogden, Carroll, Curtin, McDowell et al., 2006). However, between 2004 and 2006 there was no significant change in obesity prevalence for either men or women in the United States (Ogden, Carroll, McDowell, & Flegal, 2007). Rates of overweight and obesity generally increase with age until age 75, when there is a small drop (Flegal, Carroll, Kuczmarski, & Johnson, 1998). Men are more likely than women to be overweight, but women are more likely to be obese, especially with BMIs greater than 35 (Hedley, Ogden, Johnson, Carroll et al., 2004). During the peak years, ages 55 to 74, more than 70% of men and women are overweight and more than 35% are obese. After age 75, the rates drop slightly; just over 60% being overweight and just over 20% classified as obese. Differences in overweight and obesity rates for women vary starkly by race and ethnicity but are not as apparent for men. Across racial and ethnic groups, men have similar prevalences of overweight and obesity (Flegal et al., 1998; Hedley et al., 2004). Black and Hispanic women, by contrast, are much more likely to be overweight and obese than White women. According to the NCHS analysis of National Health and Nutrition Examination Survey (NHANES) data (Hedley et al., 2004), 77.5% of Black women are overweight, compared to 71.4% of Mexican women and 57% of White women. The prevalence of obesity is similarly skewed with the rates for Black, Mexican, and White women at 49.6%, 38.9%, and 31.3%, respectively. Fully 10% of middle-




SOURCE: National Health and Nutrition Examination Survey, various years. National Center for Health Statistics, Health Data for All Ages. http://209.217.72.34/HDAA/TableViewer/tableView.aspx?ReportId=196 Accessed May 23, 2008.

***Figure 1.*** *Obesity among adults: U.S., 1988–2004.* CENGAGE LEARNING, GALE.

aged Black women are morbidly obese, with BMIs greater than 40 (Flegal et al., 1998).

## HEALTH-RELATED CONSEQUENCES OF OBESITY

Overweight and obesity are significant risk factors for several chronic conditions and may impede proper medical care. Those who are overweight, and particularly those who are obese, are significantly more likely to have diabetes, high blood pressure, high cholesterol, coronary heart disease, and certain types of cancer (WHO, 2008). Because the likelihood of developing diabetes increases significantly as body fat increases, many have attributed the increased prevalence of Type 2 diabetes to the increased obesity of the world's population. According to the *World Health Report 2002*, approximately 58% of diabetes globally is attributable to excess weight (WHO, 2002), while in the United States the prevalence of diabetes rose 120% between 1980 and 2005 (CDC, 2008). Most of the increased risk for chronic diseases is a direct physical result of overweight and obesity, but several authors suggest that the stigma of being overweight is so pronounced in the medical field that many people avoid going to the doctor, complicating the diagnosis of medical conditions and their care (Puhl and Brownell, 2003).

Despite the clear effect of obesity on the development of chronic conditions, the effect of weight on mortality risk is ambiguous. Several studies have shown that being overweight or mildly obese does not increase, and for some may decrease, the risk of dying (Flegal, Graubard, Williamson, & Gail, 2005; Krueger, Rogers, Hummer, & Boardman, 2004; Reynolds, Saito, & Crimmins, 2005). Others find that obesity increases mortality risks, but the overall magnitude and age gradient is less clear (Fontaine, Redden, Wang, Westfall et al., 2003). The risk seems to be highest for those who have been overweight for longer periods of time and decreases if one does not become overweight or obese until after age 50 (Flegal et al. 2005). In longitudinal analyses, obesity in middle adulthood (ages 30 to 49) has been shown to be associated with an approximately six-year lower life expectancy when compared to normal weight individuals (Peeters, Barendregt, Willekens, Mackenback et al., 2003).

Excess weight creates functional limitations, diminishes mobility, and impairs the ability to exercise at all ages. Those older adults who develop chronic illness due to their obesity still experience functional limitations beyond those created by the illnesses themselves as a result of being overweight (Himes, 2000). The relationship between obesity and disability has important implications for the projection of future disability rates. The rise in obesity may result in higher rates of disability at older ages or increased years of disability in later life (Reynolds, Saito, & Crimmins, 2005). Given the rising rates of obesity at middle ages, it is important to understand how the aging of the obese population may affect disability rates and health care needs in the future.

## SOCIAL CONSEQUENCES OF OBESITY

Several studies report economic discrimination against the overweight at all stages of employment. Societal attitudes about being overweight shape employers' attitudes about the abilities of overweight employees. For example, employers often think that overweight employees are slow-moving, have poor attendance, are unattractive, and are not good role models because of negative personality traits (Roehling, 1999). Overweight persons are less likely to be hired than applicants of normal weight. Additionally, overweight and obese people are hired for less prestigious jobs than their normal weight counterparts and have lower occupational attainment (Pagan & Davila, 1997). Overweight and obese employees are paid less than employees of average weight, but the wage penalty varies by gender, race, and age. Women face a greater wage penalty for being overweight than men (Baum & Ford, 2004). Wages of White women are affected by weight more than wages of Black and Hispanic women (Cawley, 2004). Older overweight employees are penalized more than younger workers, and those who gained weight early in life face greater wage penalties than those who gained weight later in life (Baum & Ford, 2004).

Studies suggest that social discrimination continues to occur on the basis of body size. Common stereotypes about overweight persons include laziness, self-indulgence, impulsivity, and incompetence (Rothblum, 1992). People hold overweight individuals responsible for their own condition and often think that if the overweight simply had more willpower, they would reduce their food intake and, thus, lose weight (Puhl & Brownell, 2003; Rothblum, 1992). These stereotypes persist despite evidence that overweight people generally do not have higher caloric intakes than those of average weight (Rothblum, 1992).

In addition to the personal and emotional costs of disability, chronic diseases translate into increased health care and disability costs. Lakdawalla and colleagues (2005) used simulations to calculate that obese 70-year-olds spend an excess $39,000 of health care compared to non-obese 70-year-olds. Society-wide, the direct economic cost associated with obesity has been estimated at 4% to 7% of all health care costs, or about $51.6 billion in 1995. A slightly lower amount, $47.6 billion in 1995, represents the indirect costs of lost economic output caused by morbidity and mortality due to obesity (Allison, Zannolli, & Narayan, 1999).

## CAUSES OF OBESITY

Social and environmental factors have been implicated in the global spread of obesity. Body fat is a normal and necessary part of the human body. Fat serves an important function as a store of energy that can be used by the body in response to metabolic demands. At the most basic level, obesity results from an imbalance between energy intake and energy expenditure. However, this imbalance may be the result, individually or in combination, of excess caloric intake, decreased physical activity, or metabolic disorders.

Globally, the obesity epidemic has been attributed to a broader "nutritional transition" in which, with increasing modernization and urbanization, diets have tended to shift from ones consisting of complex carbohydrates to diets with a higher proportion of saturated fats and sugars (Popkin, 2001). The introduction of sweetened beverages and processed foods in low-income countries is one factor contributing to the rapid weight gain. Other dietary changes include the inclusion of more animal-source foods and energy-dense foods. These changes in dietary patterns, combined with a decrease in physically demanding jobs, have created overall weight gain worldwide.

In developed countries, the increase in childhood obesity, in particular, has been linked to declines in physical activity. These declines take the form of reduced time spent in physical education classes and recess time in elementary schools, the increased prevalence of video and computer games as entertainment, and the reduction of family physical recreational activities. Research has pointed to the spread of obesity through social networks.

***Obesity Crisis.*** *Obesity raises the risk of a multitude of conditions, especially Type 2 diabetes. Statistics show that 90% of people with the disorder, which causes the body to become resistant to insulin, have a Body Mass Index of more than 23.* AP IMAGES.

Christakis and Fowler (2007) find that, over and above the effects of shared environment, there is evidence that individual weight is affected by the weight of those with whom individuals have close interpersonal relationships. Therefore, as obesity becomes more common it is spread among social networks.

The fight against the spread of obesity is taking place on many fronts. In 2004 the World Health Organization (WHO) issued its statement, *Global Strategy on Diet, Physical Activity, and Health*. Their recommendations cover a broad spectrum of individual and societal initiatives. These include an emphasis on improved school lunch programs and nutrition education for children, and campaigns to increase physical activity among both adults and children. The WHO notes that public policies that influence the pricing of food, either through taxation, subsidy, or direct pricing, need to be considered in ways that will encourage healthy eating. Agricultural policies and food programs are other avenues through which healthy eating and better

nutrition can be encouraged. In the United States there has been increased interest in the role of government in nutrition policy. Legislation at the local, state, and national levels has aimed at taxing foods high in calories, fat, and sugar. One proposal would use the revenue generated by these taxes to fund nutrition and physical activity programs (Jacobsen & Brownell, 2000).

The future health and economic impacts of the increased prevalence of obesity in young and middle adulthood are likely to be large. Many diseases associated with obesity, diabetes in particular, have long-lasting impacts on health, health care needs, and the ability to work. The implementation of policies designed to improve nutrition and increase physical activity may be able to reduce these future impacts. Because the longer an individual is obese, the greater the health risk, targeting individuals early in the life course may have life-long effects.

**SEE ALSO** Volume 2: *Attractiveness, Physical; Body Image, Adulthood; Health Behaviors, Adulthood; Health Differentials/Disparities, Adulthood;* Volume 3: *Cancer, Adulthood and Later Life; Cardiovascular Disease.*

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***Christine Himes***

# OCCUPATIONAL PRESTIGE AND STATUS

**SEE** Volume 2: *Social Class.*

# OCCUPATIONS

*Occupation* refers to the kind of work usually done by someone to earn a living. The type of work a person does provides one of the best simple summaries of life circumstances available to social scientists, because current occupation reflects past and future opportunities to acquire assets and gain benefits in competition with others. Occupation is a window into social stratification—that is, to the persisting unequal distribution of rank, power, and resources in a society. Although the connection between occupation and inequality is strong, it is also highly nonuniform. Thus, one's occupation is one of the most complex indicators of life circumstances in widespread use.

## MEASURING AND CONCEPTUALIZING OCCUPATION

One first issue is what counts as an occupation. Many researchers and most government statistical agencies restrict occupation to work performed for pay outside the home. Unpaid domestic or household labor is thus commonly excluded. Agricultural labor by kin for kin, including work done by children, is also not counted. These activities are excluded because they do not match the idea of *usual occupation* as work involving relatively specialized tasks that are regulated by contract and require formal training, licensing, or previous experience. This model emerged as rural agricultural economies were displaced by urban and industrial alternatives. Relatively unspecialized work gave way to specialized, potentially life-long, vocations that became key determinants of mode and level of living. Eventually the concept of work became equated with labor performed in the formal sector of an industrialized, market economy.

Government concern about ensuring that vocations had adequate supplies of labor is almost as old as urbanism—the Roman emperor Diocletian (245 C.E.–ca. 312 C.E.) decreed that all sons would follow the trade of their fathers, although practical means of enforcement hardly existed. Modern occupational tabulations date from the early industrial era when statistics retained its older meaning of measures created for purposes of state (Desrosiéres, 1998).

Although many terms are used to describe vocations, government tabulations such as the U.S. Census require classifications based on standardized uniform coding rules. From the outset, designers of codes at the U.S. Census Bureau took occupation as a potential master status, "the best single criterion of a man's social and economic status" encompassing "the kind of associates he will have," "the kind of food he will eat," and "the cultural level of his family" (Alba Edwards, in charge of occupational statistics for the U.S. Census Bureau 1920 to 1940 and quoted in Conk, 1980, p 26).

Code creation was an uneven exercise. The scale was daunting. Only government agencies could afford the massive expense of addressing the full range of occupations that individuals report. For the U.S. Census, the raw material was the answers written out in the manuscript census, in which census-takers recorded responses to questions about work usually performed. In the early 20th century, efforts were made to impose a coherent yet detailed classification scheme on such answers. Where possible, code designers relied on folk distinctions among popular trades, such as masonry, which were thought to require special skills. From 1920 on, further job titles were added to accommodate emerging educational specialties in business, engineering, and science. Solid reasons, hunches, and guesswork all played a part. Code designers often rued the lack of reliable information on which decisions could be based. This uncertainty is reflected in the residual categories, such as *Precision Machine Operatives, Not Elsewhere Classified* that are provided as catch-all categories for positions that lack a clear fit.

The result resists easy summary. Many coding schemes implement treelike patterns, in which large coarse classes may be subdivided into finer constituents. The more elaborate catalogues—dictionaries of occupational titles—list upwards of 10,000 distinct categories, whereas survey researchers distinguish at most several hundred down to as few as three. Compromise thus becomes unavoidable.

Categories, although useful, are not intrinsically ranked and thus are ill suited for addressing researchers' questions about occupational change or development. The widely shared intuition that occupation was a master status, however, implied that occupations could be viewed as locations in a social hierarchy.

## RANKING OCCUPATIONS

Various techniques for ranking and assessing occupations have been proposed (Nam & Boyd, 2004). Prominent options include ranking by sample surveys of perceptions of desirability (sometimes termed *occupational prestige*; Treiman, 1977), by distance reflected in relative infrequency of social relations such as marriage and inheritance, (Bottero & Prandy, 2003), and by weighted sums of education and earnings' levels typical of incumbents (Nam & Powers, 1983). The most influential has been the *socioeconomic index*, commonly abbreviated SEI, originally developed by sociologist Otis Dudley Duncan (1961). Every occupation is ranked by a weighted sum reflecting incumbents' earnings and level of education (adjusted for age and measuring level as a percentage of incumbents' above-the-population median for education and earnings, respectively, adjusted to some baseline decennial census). An initial motivation was the happy result that the composite based on nearly equal weights for education and earnings correlates well with prestige rankings. However, the details give rise to variants

among which researchers must choose, more or less arbitrarily (Hauser & Warren, 1997). Although empirical differences among scales are generally modest, the alternatives draw on conceptions that overlap but have not been reconciled, so that no unified interpretation exists for the difference in values across different scales.

Occupational scales (e.g., the SEI) transform occupations from discrete categories (e.g., professionals, laborers) into a continuum or hierarchy. This provides the key step for addressing occupation as some sequence of levels or ranks that occur over the life course. Blau and Duncan (1967) pioneered such studies of status attainment. They examined statistical models for social mobility based on viewing adult occupation as the culmination of a causal sequence of earlier ranks that occurred as stages over the life cycle.

The initial stage in Blau and Duncan's (1967) life-cycle model was family of origin, represented by the male parent's occupational rank (which required adopting some options for scaling occupation). Possible extensions included fathers' education and attributes of the mother.

The next cluster was schooling, which spawned an entire subfield of educational attainment research, devoted to attempts to assign relative weights to such factors as race, gender, parental background, cognitive ability, school quality, and assorted measures of motivation and encouragement.

The category *completed education* was simplified to *years completed.* This was followed by the rank of the individual's first job. From that point, typically in young adulthood, an occupational trajectory followed, culminating in the current job.

The sequence of origin, schooling, labor market entry, and current job provides a framework that allows abstraction from the detailed statistical results. At each stage, the immediately preceding stage has substantial impact. Thus, social origin influences years of schooling, whereas labor market entry level influences current job. As any further stage is reached, echoes of the past diminish, so that current job reflects origin less than first job or schooling. At every stage, variation that is residual—independent of all earlier factors—is substantial. Hence, the two themes are cumulation, in which every outcome depends on relative success or failure at earlier stages, and decoupling, in which later statuses diverge from earlier ones.

The initial scheme was an open-ended framework. Inserting more measurements between any two stages allows for statistical estimates of the relative contribution of the new factors to the transition. One of the most prominent additions, often called the Wisconsin model after the university and state where the research occurred, emphasized the importance of aspirations in persisting at school and in ending up in a high-ranking job (Sewell, Hauser, Springer, & Hauser, 2003).

Status attainment implies an overall pattern for occupational trajectories. A rough sketch is straightforward. As age-mates advance through young adulthood, a shrinking proportion continues on to the next year of school. The fraction that leaves school then enters the labor market. At each step, those who lasted one more year obtain better jobs than those who left earlier. In the United States, a curvilinear pattern exists in which the bump-up for an added year in school rises sharply with each succeeding year (Hauser & Featherman, 1977, Fig. 5.4).The result is a fan, exposing ever-wider gaps between average rank of first jobs with each increment to education. These initial gaps then widen further because increases in job rank, up to peaks at around 40 years of age, are greater the higher the initial labor market entry point.

An analogy helps shed light on how this unfolds. At issue are differences due to how time is spent during the critical years. A good year is one spent earning top grades at a top school. A bad year is one spent working in a menial position in a fast-food restaurant. One might liken this to drawing cards in a card game. The good year is the equivalent of drawing a top card, such as an ace. Flipping burgers is like losing a turn. These lost turns do not come back, however, and results are cumulative. Only those who collect enough *good cards* in a timely manner are allowed to keep playing when the higher stakes finally come up for grabs.

So who ends up with good cards? Many are already dealt at birth. However, with rare exceptions, birth portions do not directly translate into occupational advantage. High cards, such as birth advantage, only grant access to higher stakes tables, such as better schools, but completing school, and gaining adequate marks, remains an individual accomplishment. These particular achievements (e.g., admission to medical school) are the same in name only, however, because those with better birth portions will require less effort or ability to complete particular achievements. The result is shading—step by step, when higher (versus lower) ranks are examined, the predominance of higher (versus lower) origins is more marked, whereas exceptions are more unusual, but they do occur. In a parallel manner, greater success at school, or labor market entry, favors higher adult occupational rank, but only as increased odds of success and almost never strict certainty.

## RACE AND GENDER DIFFERENCES IN OCCUPATIONS

Another source of divergence in occupations and careers are ascribed (or inborn) characteristics, including gender and race. Occupations are strongly influenced by gender. Coarse, medium, or even extremely fine occupational distinctions show strong occupational sex segregation—female workers are heavily concentrated in a relatively

small proportion of occupational titles or categories (Jacobs, 1989). This has diminished over time but has hardly disappeared (Queneau, 2006), and it has survived despite the disappearance of any male advantage in overall education (Bae, 2000).

Women are much more likely to work part-time and to leave and rejoin the labor force sporadically, a pattern thought to indicate weak labor force attachment on the part of such employees. This undermines the accumulation of experience and employer willingness to invest in training. Lower wages result (Jacobsen & Levin, 1995). Another consequence is that occupations are more tightly tied to level of education, that is, less open to subsequent career developments (Treiman & Terrell, 1975).

Why this occurs remains open to debate. Reskin and Roos (1990) described the pattern wherein changes in female proportions were restricted to relatively few occupations as due to *queuing*, whereby the less-desired gender is allowed in only after the more desired gender is elsewhere accommodated. Evidence also exists, however, that returns, such as wages, decline *after* feminization and do not precede it, as queuing would require (England, Allison, Wu, & Ross, 2007).

Family pressures, both perceived and real, play a role. Gender is a proxy, an imperfect but inexpensive indicator, of liability to child-bearing and child-care obligations that could compete with work. Trade-offs between job flexibility and lack of career advances might be at work (Bender, Donohue, & Heywood, 2005). However, although women do more unpaid housework than men do and absorb more of the burden of child care when children are young, these differences diminished quite sharply from 1965 to 1995 (Bianchi, Milkie, Sayer, & Robinson, 2000). Meanwhile, evidence remains strong of glass ceilings in which differences in career outcomes are greater toward the top and tend to grow over the length of careers (Cotter, Hermsen, Ovadia, & Vanneman, 2001).

Research on racial differences in careers also focuses primarily on wage levels and only indirectly on the contributions of occupation. Racial differences in careers are marked. Divergence increases over time, and some evidence of glass ceilings has been provided (Maume, 2004). A key debate continues whether differences between races trace back to premarket differences of less effective education and lower cognitive skills (Neal & Johnson, 1996). Much of the racial contrast, however, can be shown to emerge as careers mature and with greater impact among the better educated, showing that the accumulation of assets valued by employers is impeded by apparent discrimination (Tomaskovic-Devey, Thomas, & Johnson, 2005).

## LIFE COURSE IMPLICATIONS OF OCCUPATIONS AND CAREERS

The very concept of a career, of a sequence of jobs that progress upward over the life cycle, is likely becoming more restricted to a narrowing slice of better jobs. This corresponds to the concept of dual labor markets, in which low pay, low skill, and absence of advancement contrast with conditions in jobs that offer higher pay, chances to use and accumulate skills, and good chances for promotion. The most recent variant emphasizes computerization as a cause of polarization. Some tasks, such as bookkeeping, are highly routine and subject to direct replacement by information technology. Nonroutine tasks, however, such as writing persuasive legal briefs, cannot be done by computers, even though computers aid in some related tasks, such as legal research. Thus, adding computers has a polarizing effect, undermining the market value of much routine work while enhancing returns to some, but not all, nonroutine jobs. Impacts are apparent within detailed occupations and between major occupational groups—increases in computer use undermine the value of less-skilled occupations but raise both average rewards and internal differences within higher skilled occupations (Autour, Levy, & Murname, 2001) Another factor undermining the relative returns of workers with lower skills is increased international competition (e.g., globalization; Acemoglu, 2003).

The overall pattern is that inequality in earnings began to rise rapidly after 1970. Differences rose between individuals within occupations, as did differences between occupations, and the size of gaps attributable to additional years of schooling (Levy & Murnane, 1992). This is complemented by evidence that more recent cohorts entering the labor force experience polarization in career outcomes that are more dramatic and rapid than in the past (Bernhardt, Morris, Handcock, & Scott, 2001).

This overshadows the longer term tendency in which rising average educational levels translate into occupational upgrading. Ever since continuing economic development began with the emergence of industrialism, the mix of jobs has improved over any decade or longer duration. First, agriculture gave way to industrial jobs, which initially became more common in the latter half of the 19th century. By the 1920s, slightly more than half of all jobs outside agriculture were nonmanual, and the proportion of such nonmanual labor rose to more than 80% by the turn of the 21st century (U.S. Census Bureau, 2008). Although coarse classifications such as manual versus nonmanual only roughly capture the concept of worse-versus-better jobs, as illustrated by contrasting tool-and-die maker (i.e., manual) with food-service worker (i.e., nonmanual), an overall trend to work requiring more training and offering better working conditions and rewards becomes apparent.

Contrasts in rewards due to differences in occupation are not limited to earnings. Morbidity, liability to various causes of ill health, and increased early mortality vary sharply with social rank. Such health gradients are not only apparent within a given country but in comparisons among countries as well (Marmot & Wilkinson, 2006). Whether this is uniform or whether distinct patterns link components of rank, such as education or earnings, to different facets of health is likely to remain a lively source of controversy for the foreseeable future.

**SEE ALSO** Volume 2: *Careers; Employment, Adulthood; Gender in the Work Place; Military Service.*

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***Steven Rytina***

# P

## PARENT–CHILD RELATIONSHIPS, ADULTHOOD

The relationship between parent and child is one of the most durable bonds in the family, usually lasting far beyond the offspring's childhood and ending only with the death of parent or child. Once a child reaches adulthood, relationships with his or her parents are no longer driven by the child's dependence and development. Scholars of the family are interested in the characteristics of adult parent–child relationships both because of their implications for individual well-being and because of what they suggest about the institution of the family.

With life expectancy almost doubling in length since the turn of the 20th century, children now commonly reach midlife, and not unusually old age, with at least one parent still alive. Although co-survival of generations may have expanded opportunities to exchange resources across generational lines, other trends, such as geographic mobility, weakening norms of responsibility, and the rise in divorce and remarriage rates, have possibly rendered these relationships less dependable than before.

### THEORETICAL AND CONCEPTUAL MODELS

Several different models exist that deal with adult parent–child relationships, including the functionalist, intergenerational solidarity, intergenerational conflict and ambivalence, and intergenerational transfers perspectives.

**Functionalist Perspective** Early theories of adult parent–child relationships evolved from functionalist perspectives in the social sciences that viewed the unmooring of adults from their families of origin as necessary to societal modernization (Goode, 1963; Ogburn, 1932). In this line of reasoning, extended familism was considered incompatible with an increasingly technocratic and meritocratic society that required a trained, specialized, and geographically mobile labor force. Nuclear families needed to be free from the constraints of older generations to maximize their educational and occupational success and, by extension, the economic vitality of the nation (Parsons & Bales, 1955).

The next generation of theories proposed a more nuanced model. Research revealed that even as opportunities for frequent face-to-face interaction between generations were reduced, relatively rapid transportation and communication technologies allowed the maintenance of strong affective ties, in what came to be described as "intimacy at a distance" (Rosenmayer, 1968). This *modified-extended family* was considered to fit well with the demands of modern economies and served as a corrective to the isolated extended family as a normative family form (Shanas & Sussman, 1977).

During this period, several perspectives emerged to explain the behavior of parents and adult children toward each other. *Task-specific theory* (Litwak, 1985) proposed that adult children were better at performing some tasks than other relatives or friends. For instance, the theory predicted that older adults would receive long-term chronic care from nearby adult children but not from friends and neighbors. Children, unlike friends and neighbors, tend to have the level of commitment necessary to

provide intensive care giving but also need to live close to the care recipient. The notion that adult children could relocate on an as-needed basis to meet the challenges of care giving highlighted the flexible nature of family arrangements. A competing theory, the *hierarchical compensatory model*, proposed that older adults turn to others for assistance in a hierarchy based on preferences. Spouses are at the top of the hierarchy, and adult children follow the spouse as preferred providers, but, if children are not available, then other relatives, friends, and finally formal services follow in rank order (Cantor, 1979). Both theories supported the notion that adult children were committed to ensuring the well-being of their older parents and that older parents preferred to rely on their children for help.

**Intergenerational Solidarity Perspectives** In the 1970s researchers turned toward codifying and classifying the nature of intergenerational relations. Borrowing in part from Emile Durkheim's (1858–1917) concept of social solidarity and Fritz Heider's (1958) and George Homans's (1950) theories of small-group cohesion, David Mangen, Vern Bengtson, and Pierre Landry Jr. (1988) developed the *intergenerational solidarity paradigm*. Both a conceptual scheme and a measurement model, the solidarity paradigm itemized the sentiments, behaviors, attitudes, values, and structural arrangements that bind generations together. Intergenerational solidarity was operationalized along seven dimensions: affectual solidarity (emotional closeness), associational solidarity (social interaction), structural solidarity (opportunity for interaction based mostly on geographic proximity), normative solidarity (filial obligation), consensual solidarity (perceived and actual agreement on values and opinions), and functional solidarity (provisions of material, instrumental, and social support).

Since its development, the solidarity paradigm has been the de facto gold standard for assessing the strength of intergenerational relationships both in the United States (e.g., Lawrence, Bennett, & Markides, 1992) and internationally (e.g., Lowenstein, Katz, & Daatland, 2005). However, research demonstrated that the separate dimensions of solidarity could not justifiably be added together to form a single measure of intergenerational solidarity (Roberts & Bengtson, 1990). More promising were approaches that were relationship centered rather than variable centered, which could group intergenerational relationships based on seemingly antithetical dimensions, such as being geographically distant but emotionally close (Silverstein, Bengtson, & Lawton, 1997).

**Intergenerational Conflict and Ambivalence Perspectives** Responding to criticism that the solidarity paradigm did not allow for negative emotions and behaviors, researchers subsequently added the dimension of conflict to the model (Clarke, Preston, Raksin, & Bengtson, 1999). Indeed, challenges to the solidarity model came into high relief by scholars advancing *intergenerational ambivalence theory*, a perspective that focused on mixed feelings—the simultaneous occurrence of affection and hostility—that come from the tension between autonomy and dependence in intergenerational relationships. Although ambivalent feelings are obvious early in the family lifecycle (e.g., adolescents striving for independence), they are evident in older families as well (e.g., aging parents becoming dependent, adult children not living up to parental expectations; e.g., Pillemer & Suitor, 2002). Research has moved toward integrating the solidarity and ambivalence perspectives.

**Intergenerational Transfers Perspective** A different perspective on adult parent–child relationships is provided by research on intergenerational transfers, which is concerned with identifying motives for providing time and money resources to family members across generational lines. In this line of research, parents and their adult children are considered interdependent actors who provide for each other over the life course.

Findings that transfers tend to be targeted at children with the greatest need offer some evidence that older parents distribute resources altruistically. Research showed that adult children in the lowest income category were more than 50% more likely than those in the highest income category to receive a money transfer from their parents (McGarry & Schoeni, 1997). Similarly, older adults in European nations with relatively generous pension programs are more likely to provide economic transfers to needy children (e.g., Fritzell & Lennartsson, 2005).

Reciprocity has been a consistent theme in the study of adult parent–child relationships. This perspective maintains that the obligation to pay a debt is found in intergenerational family relations as well as market relations. In developed nations, the most commonly tested question is whether adult children who receive more money from their parents provide more instrumental support to them. Several investigations have shown such a pattern (e.g., Caputo, 2002), but others have not or have found substantively small effects (McGarry & Schoeni, 1997).

Several studies found that parents who in middle age provided financial assistance to their young-adult children were more likely to receive social support from them in old age (Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). The obligation to reciprocate is reinforced through norms and emotions; one study found that adult children who felt they owed their aging parents a debt of gratitude were more prolific providers of support to them (Ikkink, Van Tillburg, & Knipscheer, 1999).

It has long been known that the strength of emotional bonds between parents and children is positively

correlated with the volume of intergenerational transfers between them (Rossi & Rossi, 1990; Silverstein, Parrott, & Bengtson, 1995). However, motives for transfers are often mixed and not easily distinguished. Transfers of money that stimulate time transfers from children (visiting, social support) may strengthen intergenerational attachment and prompt additional transfers (Attias-Donfut, 2000).

## VARIATION IN ADULT PARENT–CHILD RELATIONSHIPS

Several factors have an influence on the nature of parent–child relationships, including family structure, ethnicity, and national contexts.

**Family Structure** As a result of historical increases in divorce and remarriage, the family has fragmented into myriad family forms that include complex configurations of step- and biological kin (Casper & Bianchi, 2002). Numerous studies have found that parental divorce suppresses transfers of money and time between parents and their adult biological children and that remarriage does the same between stepparents and their adult stepchildren (e.g., Furstenberg, Hoffman, & Shesthra, 1995; Pezzin & Schone, 1999; Silverstein et al., 1997). Divorce has been shown to disrupt transfers by weakening normative beliefs about intergenerational responsibility and by reducing opportunities for interaction and the development of emotional cohesion between generations. Incomplete bonding with a stepparent, competition with stepsiblings, conflict between custodial and noncustodial parents, and the absence of clear institutional rules for establishing normative expectations within stepfamilies conspire to put children at risk of having strained or distant relations with both step- and divorced biological parents (Furstenberg & Cherlin, 1991).

The impact of divorce on intergenerational transfers is greater for fathers, who are less likely than mothers to receive primary custody of their children and more likely to remarry and live with stepchildren. Research by Frank Furstenberg, Saul Hoffman, and Laura Shesthra (1995) suggested that lower levels of intergenerational support received by divorced fathers is not a function of the amount of child support they provided but of the diminished investments of time and emotion they made in their natural children when the children were growing up. Liliana Pezzin and Barbara Steinberg Schone (1999) found that fathers were less sensitive in responding to the needs of their stepchildren than they were to the needs of their biological children, concluding from this that altruism is less a potent social force toward children that fathers did not sire.

An alternative to the support deficit perspective is that marital disruption and remarriage, and the various family recombinations that result, have expanded the kin supply and increased the potential support portfolio of older adults by adding step-relatives to the family network. Taking these social changes into consideration has resulted in the need to develop new models of complex family forms. For instance, the *latent kin matrix* (Riley & Riley, 1993) brings to light how close intergenerational relations are culled from the pool of kin and nonkin associates but also emphasizes greater uncertainty in the stability of these more voluntary family ties.

**Ethnic Variation** Some scholars posit that elders from minority and traditional cultures have greater opportunities to exchange family support across generations (Angel & Angel, 2006). For example, African Americans are more likely than Whites to reside in extended family households, live close to relatives, and report having "fictive kin" (Chatters & Jayakody, 1995). Latinos also are more likely than Whites to reside in multigenerational households (Himes, Hogan, & Eggebeen, 1996). However, other evidence suggests that economic insufficiency in minority families may suppress their ability to deliver care despite stronger intentions to do so (Silverstein & Waite, 1993).

Older immigrants are more likely to live with kin than their native-born counterparts. This pattern is characteristic of immigrants worldwide. Judith Treas and Shampa Mazumdar (2004) pointed out several unique intergenerational challenges facing older immigrants. First, older immigrants are at elevated risk of social isolation as a result of their limited English proficiency and tendency to subordinate their own needs to those of their families. Second, older immigrants are expected to care for their grandchildren at an age when they are also likely to experience the need for care themselves. Third, they are often called on to sustain the cultural integrity of their native land while their adult children are acculturating into the host society. The popular image of immigrant elders contentedly embedded in family-based support networks is likely an oversimplification.

**National Context** Formal support mechanisms—government, voluntary organizations, and private enterprises—have become more important in serving the needs of older adults in developed countries. Research finds that the salience of intergenerational relations—as measured by proximity, frequency of contact, and provisions of support—tends to be weaker in nations with more generous public services and benefits to the elderly and less coercive family cultures.

A key question with respect to public policy is whether more liberal social benefits (a) "crowd out" intergenerational

family transfers, (b) "crowd-in" intergenerational family transfers, or (c) complement intergenerational family transfers. Evidence shows some support for all three mechanisms (Künemund & Rein, 1999). One study, for instance, found that formal support reduced informal support among older Whites but not among older Blacks (Miner, 1995). However, another found no evidence that more extensive use of formal services was associated with less extensive informal care (Penning, 2002). Similarly, cross-societal research finds that welfare state services tend to be complementary with respect to family care (Attias-Donfut & Wolff, 2000). However, Gerdt Sundstrom, Lennarth Johansson, and Linda Hassing (2002) in an historical analysis found that newly instituted policies restricting eligibility of older adults for home help services in Sweden was followed by increases in family care, providing some evidence that the state had crowded-in adult children.

Complementarity appears to be less true for income transfers. Universal income maintenance programs effectively substitute for financial transfers from adult children, as there are relatively few older adults in need of transfers from children in modern welfare states (Lee, 2000). Net intergenerational financial transfers are decidedly downward—from older parent to adult children—as enabled by generous pension provisions (Fritzell & Lennartsson, 2005; Lowenstein et al., 2005).

In most developing nations, older adults rely almost exclusively on their families for needed support. Time-for-money exchanges between generations describe a common type of mutual aid in the less developed world, where older parents provide household labor and/or childcare services to the families of their adult children in exchange for money or food (Frankenberg, Lillard, & Willis, 2002). However, the primacy of intergenerational relations has declined in rapidly developing nations. In many East Asian nations, filial piety is said to have weakened, altering traditional expectations and social understandings between generations. In the least developed nations of sub-Saharan Africa, adult children have few resources to exchange with their parents and instead devote them mostly to their children, creating a crisis in the support systems of older adults (Aboderin, 2004).

## FUTURE DIRECTIONS

Five themes emerge as fruitful directions for future research on adult intergenerational relationships. First, the gerontological implications of family change will soon come to fruition, as those in more complex, less traditional, and smaller families enter old age. How much older parents can rely on their children for support in these "new" family forms remains an open question. Second, increased longevity has verticalized multigenerational families, creating the possibility that middle-aged individuals may need to support frail older parents, young adult children, and/or grandchildren at the same time. Those in the sandwich generation clearly face difficult challenges if they are simultaneously caring for older and younger generations. Third, the free flow of labor across national borders has made most European and North American nations more culturally heterogeneous. Understanding how immigrants and their descendants negotiate the normative constraints of their native cultures and the forces of assimilation will inform policy makers about the shifting terrain of family life for older and younger generations.

Fourth, public policies, particularly those related to pensions and other benefits will loom large for the well-being of the elderly and their descendants. Postponing age of eligibility for Social Security benefits and reducing the value of European pensions will lower standards of living for older generations and impede transfers received by younger generations. Studies of the impact of public policies on older persons and their family members must account for interdependence between generations. Finally, the concept of ambivalence has taken hold as one of several dominant paradigms guiding research on adult intergenerational relationships. Questions that remain to be answered include how ambivalence is psychologically and socially managed or resolved, how it changes over the life course and varies across social groupings, how emotional and structural ambivalence are connected, and whether ambivalence can be incorporated into the other conceptual models, such as solidarity, or whether it is a unique and independent aspect of intergenerational relations.

**SEE ALSO** Volume 1: *Parenting Style;* Volume 2: *Fatherhood; Motherhood; Noncustodial Parents; Social Networks; Social Support, Adulthood;* Volume 3: *Intergenerational Transfers.*

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***Merril Silverstein***

# PARENTAL BEREAVEMENT

**SEE** Volume 2: *Midlife Crises and Transitions.*

# PERSONALITY

Personality refers to relatively enduring individual differences in patterns of thoughts, feelings, and behavior. A classic definition of personality is provided by author Gordon Allport (1897–1967): "Personality is the dynamic organization within the individual of those psychophysical systems that determine [her or his] characteristic behavior and thought" (1961, p. 28). Embedded in Allport's definition are the ideas that (a) personality attributes are individual difference characteristics; (b) personality attributes partially reflect biological processes (i.e., psychophysical systems); and (c) personality attributes influence patterns of adjustment to the environment.

## IDENTIFYING BASIC PERSONALITY TRAITS: THE BIG FIVE

A major task for personality scholars is to identify and classify the many possible personality attributes or traits. One starting point for this task is language itself. According to the *lexical hypothesis*, the most important personality attributes are reflected in the terms used to describe individuals. Using the logic of the lexical hypothesis, many personality psychologists believe that an analysis of how personality-related adjectives (e.g., calm, talkative, dominant, kind) cluster together might provide some insight into the number and nature of the basic units of personality.

In 1936 Allport and psychologist Henry Odbert (1909–1995) attempted to classify the personality trait names in the English language. Since that time, several researchers have engaged in this process, and there is now considerable agreement that five broad domains—the *Big Five*—capture many of the personality adjectives found in the English language. Each factor consists of a cluster of related characteristics: extraversion (traits such as being talkative and energetic); agreeableness (traits such as being cooperative and kind); conscientiousness (traits such as being responsible and dependable); neuroticism (traits such as being tense and nervous); and intellectual or openness to experience (traits such as being curious and artistic). Studies using languages other than English usually find similar dimensions. The exceptions are that an openness dimension sometimes does not appear distinctly in different languages, and that additional dimensions particular to a certain culture will sometimes appear. Nonetheless, the first four dimensions of the Big Five appear to be more or less robust across languages and thus cultures.

There is emerging (but not complete) consensus that the Big Five can serve as a reasonable working model of the basic dimensions of adult personality. Moreover, most of the Big Five traits are evident in adolescents and in children as young as age 5. (Openness, however, may not become clearly evident until late adolescence.) The Big Five also can organize the ways that psychologists have classified the individual differences that are evident in very young children (often called dimensions of temperament). This extension of the Big Five to the very youngest ages helps to focus attention on a core set of personality dimensions that are broadly relevant for functioning and adaptation across the life span.

## THE ORIGINS OF PERSONALITY: GENETIC AND ENVIRONMENTAL FACTORS

Consistent with Allport's convictions about the biological basis of traits, researchers are interested in genetic influences on personality. Much of the evidence in support of this idea comes from studies examining personality similarity in twins. One approach is to compare the degree of similarity of identical twin pairs reared in the same household, with the degree of similarity of fraternal twin pairs reared in the same household. If identical twins are much more alike than fraternal twins, then researchers infer that genetic factors must account for some part of personality. This reasoning draws on the fact that identical twins share all of their genes, whereas fraternal twins share, on average, 50% of the same genes. Thus, because both types of twins are living in the same environment, the major explanation for any increased similarity in identical twins is their increased genetic similarity.

A few broad conclusions can be drawn from twin studies. In general, identical twins are more similar in terms of the Big Five than are fraternal twins. Likewise, the few studies that have been able to examine identical twins reared apart indicate that these twins are fairly similar in terms of their personality attributes in adulthood, despite growing up in different circumstances. Thus, genetic factors do account for personality differences between people. However, identical twins are not perfectly alike in terms of their personalities (regardless of where they were reared), indicating that non-genetic factors (called environmental factors in this context) also play an important role in shaping personality. Some examples of environmental factors may include early school experiences and experiences with peers; researchers are currently working to develop a precise understanding of the particular environmental factors that shape personality. In sum, twin studies underscore a point raised by Allport many years ago: "No feature of personality is devoid of both hereditary and environmental influence" (1961, p. 68).

## THE DEVELOPMENT OF THE BIG FIVE IN ADULTHOOD

Research that suggests a genetic basis for the Big Five does not exclude the possibility that personality traits

change with age or that personality traits can be affected by life experiences. The study of personality development attempts to answer these questions. Researchers examining questions about personality development ideally use longitudinal designs, in which the same group of individuals is followed over a long period of time and assessed repeatedly with the same personality measures. Most of this research is descriptive in that it attempts to quantify the degree of personality stability and change across the life span. A complication in such research is that there are several ways to conceptualize and measure stability. The two most commonly investigated questions have to do with *differential stability* and *absolute stability*.

Studies of differential stability evaluate whether the relative ordering of individuals on a Big Five attribute are consistent over time. A researcher who wants to evaluate the differential stability of extraversion, for example, might investigate whether individuals who are relatively extraverted compared to their peers in their 20s are also relatively extraverted compared to their peers in their 40s. Studies about absolute stability, by contrast, examine the *degree* of stability in the exact amount or level of a personality attribute over time. A researcher who wants to evaluate the absolute stability of extraversion might examine whether, on average, individuals are more extraverted in their 20s compared to their 40s. Alternatively, this researcher might want to know how many members of a sample increased in extraversion from their 20s to their 40s, compared to how many members decreased during that time. Although questions about differential and absolute stability are distinct, both are important questions about personality development.

**Research on Differential Stability in Adulthood** Differential stability is usually examined by calculating the correlation (a statistic that assesses the degree to which two variables are associated) between the same measures administered on different occasions to a sample followed across substantial intervals of time (e.g., 1 or more years). Because a sizable number of studies have evaluated differential stability, researchers have used a statistical technique called *meta-analysis* to summarize these results. Meta-analytic techniques allow researchers to essentially average results from all available information and then draw quantitative conclusions from an entire research literature.

One prominent meta-analysis summarized correlations from 152 longitudinal studies. The general result was that the Big Five traits showed increasing differential stability with age. Specifically, there was a fairly modest amount of differential stability when individuals were followed during their early childhood years, whereas there was a very strong amount of differential stability when individuals were followed in their 50s and older. This pattern of differential stability was basically the same for all Big Five traits, and there was little evidence of gender differences in differential stability.

These meta-analytic findings are noteworthy because they confirm that the Big Five traits are relatively enduring characteristics by the time a person reaches adulthood. The current explanation for increasing differential stability with age is that adulthood is a time in the life span when maturational changes are reduced, social roles stabilize, environmental changes are increasingly subject to individual control, and individuals have a more stable sense of self. These conditions tend to promote stability. Even so, the meta-analytic findings also indicate that there is never a time in the life span when personality is set in stone. This seems to contradict a suggestion by the American psychologist William James (1842–1910), who said that personality is "set like plaster" by the age of 30. The Big Five traits do become increasingly stable after age 30; however, there does not appear to be a point when personality is fixed for all people.

**Research on Absolute Stability in Adulthood** Research on this topic has generally focused on comparing mean levels of traits measured at different ages. In others words, much of this research is useful for answering questions about whether there are differences in average scores on measures of the Big Five for 20-year-olds compared to 40-year-olds. Across studies and meta-analytic results, it appears that average levels of agreeableness and conscientiousness increase with age, whereas average levels of extraversion, neuroticism, and openness decline. Many of the absolute changes in the Big Five tend to be small and gradual when viewed as year-to-year comparisons.

The absolute changes in the Big Five tend to reflect increases in personal qualities that help individuals meet the demands of the adult roles of worker, committed romantic partner, and parent. This trend has been labeled the maturity principle of personality development (i.e., there is increased personality maturity with age). Young adulthood (i.e., the years between the late teens and late 20s) is a time when many absolute changes in personality occur. This is also a time in the life span when individuals gradually start to assume the roles of worker, partner, and parent. Thus, the average absolute changes in the Big Five seem to match the demands of the life course. This finding raises important, but mostly unanswered, questions about the causal connections between adult roles and personality change. For example, it might be the case that assuming the role of a worker or a committed romantic partner creates increases in conscientiousness.

## PERSONALITY AND LIFE OUTCOMES

Allport noted that, "personality *is* something and *does* something" (1961, p. 29). Literally hundreds of studies link personality to life outcomes. Fortunately, a number of meta-analyses on these topics provide some of the best evidence that personality differences are associated with important life outcomes, including longevity and health behaviors; crime and aggression; relationship satisfaction and stability; achievement-related outcomes; and overall life satisfaction.

**Longevity and Health** A life outcome of great importance to individuals and society is longevity. A striking example linking personality with mortality comes from an analysis that followed a group of more than 1,200 individuals from the 1920s through the mid-1980s who were mostly middle class. Study participants who were rated by their parents and teachers as more prudent and conscientious when they were children tended to live longer than participants who were rated as less conscientious. Indeed, conscientiousness appears to be the strongest Big Five personality predictor of longevity based on one meta-analysis and review (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). This report also summarized evidence indicating that people with personality characteristics such as high levels of agreeableness, high levels of extraversion, and low levels of neuroticism lived longer lives.

One potential explanation for the association between conscientiousness and longevity is that conscientiousness statistically predicts many of the behaviors that either promote or hinder physical health. One meta-analysis summarized the results of more than 190 studies on this topic (Bogg & Roberts, 2004). Conscientiousness was negatively associated (i.e., as scores on this trait increased, these behaviors decreased) with drug, alcohol, and tobacco use; risky sexual activity; unsafe driving practices; suicidal ideation; and involvement in violence. As conscientiousness increased, involvement in these sorts of behaviors decreased.

**Crime, Delinquency, and Antisocial Behavior** Crime and antisocial behavior have enormous consequences for society. One meta-analysis examined the association between personality and crime (Miller & Lynam, 2001). Agreeableness and conscientiousness were negatively associated with antisocial behavior (i.e., as scores on these traits increased, antisocial behavior decreased), and similar results were obtained when researchers examined links between antisocial behavior and comparable traits from other personality models. In short, individuals who engage in criminal behavior tend to be antagonistic to others and to lack the ability to control impulses or otherwise delay gratification.

**Relationship Outcomes** Close relationships are valued by most adults, and consistent evidence links personality with relationship satisfaction and stability. One meta-analysis found that neuroticism was negatively associated with marital satisfaction (Heller, Watson, & Ilies, 2004). Agreeableness was positively associated with marital satisfaction, although that relation was examined in 19 studies compared to the 40 studies that examined neuroticism. In fact, there were detectable associations between personality and marital satisfaction for the other Big Five traits, with perhaps the exception of openness. In terms of predictors of divorce, one meta-analysis reported that high levels of neuroticism combined with low levels of agreeableness and conscientiousness were associated with an increased risk for divorce (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). These three individual personality effects were each stronger than the association between socioeconomic status and risk for divorce.

**Achievement and Work Outcomes** Applied psychologists and organizational scholars have had long-standing interest in the connection between personality and job performance. Meta-analytic findings suggest that conscientiousness is the best overall predictor of job performance out of the Big Five dimensions. Consistent with the effects of conscientiousness on job performance, a series of studies were conducted finding that conscientiousness predicted college grade point average (GPA) even when accounting for achievement test scores such as the Scholastic Aptitude Test (SAT) (Noftle & Robins, 2007). Thus, conscientiousness appears to be a robust predictor of achievement-related outcomes. Personality traits also are associated with ratings of job satisfaction. In particular, low levels of neuroticism and high levels of extraversion are related to job satisfaction, according to a meta-analytic review; however, there are also indications that conscientiousness is also positively associated with job satisfaction.

**Life Satisfaction** Some people are happier and more satisfied with their lives than others, and these life satisfaction judgments are related to personality dimensions. One meta-analysis from 19 studies involving more than 12,000 participants concluded that all Big Five traits except for openness were related to life satisfaction (Heller, Watson, & Iles, 2004). The strongest predictor was a low level of neuroticism, whereas extraversion, agreeableness, and conscientiousness were all positively related to life satisfaction at about the same degree. In short,

personality traits may partially explain why some people are happier with their lives than others.

## FUTURE DIRECTIONS FOR RESEARCH

Personality research is an active area that intersects with many disciplines. A considerable amount is known about the structure, development, and correlates of personality traits in adulthood. However, personality is also a contentious research area that can ignite vigorous debates and disagreements. For example, some researchers favor models of personality structure other than the Big Five. In response, other researchers note that the Big Five enjoys a level of support currently unmatched by any other competing model. Some of the debates in personality simply have to do with the topic itself. Personality covers human individuality, and there are always exceptions to every generalization. Thus, there is a wellspring of material for contrary arguments by critics. At the same time, some of the debates in personality psychology occur because the subject raises so many questions that have yet to be fully answered.

Three issues stand out as important directions for future research. First, there will be continued interest in the neurological systems, brain structures, and specific genes that underlie the Big Five. For instance, theoretical and empirical work traces extraversion and its childhood analogues to a biological system that govern one's sensitivity to rewards or incentives. There is also considerable interest in identifying specific genes associated with personality characteristics, and in studying precisely how genes interact with life events to shape life outcomes. All told, future work will continue to evaluate how biological processes and life events work together to shape personality. Research that ignores either of these two major factors will become increasingly less informative.

Second, there will be continued efforts to understand adult personality development. For instance, there is a debate between proponents of the *intrinsic maturational* perspective and proponents of the *social investment* perspective. The intrinsic maturational perspective argues that changes in personality are driven by biological processes, such as changes in the prefrontal lobes of the brain that might lead to increases in conscientiousness in young adulthood. The social investment perspective, by contrast, posits that changes in adult personality are related to involvement in or anticipation of particular roles such as committed romantic partner, worker, and parent. According to the social investment perspective, personality changes are generated by life experiences such as the birth of a child and involvement in steady and satisfying employment, which, for example, may create demands for increased conscientiousness. Future research will determine the level of support for the intrinsic maturation and social investment perspectives, and it is likely that aspects of both perspectives have some merit.

Third, future investigators will strive to identify the processes that link personality to life outcomes. It seems likely that multiple mechanisms will be involved for each broad association. For instance, several potential processes may explain why personality is correlated with job performance. Some mechanisms may involve direct effects, whereby certain people simply perform tasks better than others or have fewer conflicts with coworkers because of their personalities. However, additional and more subtle processes may play out over the life course. For instance, more conscientious individuals might select certain educational or career paths, and conversely, gatekeepers such as employers or college admissions boards might select people based on their personality attributes or motivational tendencies as evidenced in application materials. Nonetheless, involvement in these particular settings may further accentuate conscientiousness and thus promote job performance. Thus, ongoing transactions between social selection and social influence may ultimately help explain the links between personality and life outcomes.

All in all, personality is an active and contentious specialty area in the social and behavioral sciences. Personality is a fertile meeting place of insights from biology, psychology, and sociology, which makes it a vibrant and exciting topic. Despite many unanswered questions, it is clear that personality "is something that does something" when it comes to understanding adaptation across the life span.

**SEE ALSO** Volume 1: *Identity Development;* Volume 2: *Genetic Influence, Adulthood;* Volume 3: *Self.*

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## POLICY, EMPLOYMENT

Employment policy shapes people's work lives and thus a diverse range of life course outcomes. Along with economic factors such as unemployment rates or industrial trends, policies set the context in which people's work lives unfold by regulating certain aspects of employment and attempting to fix perceived injustices. Employment policies may also involve direct interventions in one's labor market experiences, such as opening career doors to a member of a subgroup who had once been denied entry to a job. It can also refer to macroeconomic policies designed to foster desired conditions for all individuals in a society. Traditionally, employment policies focused on unemployment, often involving financial programs to support individuals during times of job loss.

Although smoothing the transition between employment and nonemployment remains a central goal of some employment policies, policy makers have come to recognize and address other forms of transition that have both short- and long-term consequences for individual well-being. Among the wide range of transitions encompassed by employment policies are (a) ensuring that schools and postschool forms of education prepare younger people adequately for the world of work; (b) enabling workers to manage the simultaneous demands of employment with domestic responsibilities, such as child care or elder care; and (c) easing the transition for older people from employment into retirement through pension policies.

Governments enact employment policies to ensure that the law enforces employment practices that mesh with societal-level values such as equality of opportunity. Specific polices encompass gender equality in terms of income and access to specific occupations, equal access to employment for groups traditionally excluded from particular paid forms of employment, and the protection of workers' health and well-being. An important goal of most employment policies is to eliminate discrimination from the workplace. (To discriminate against someone means to treat that person differently, or less favorably.) Individual employees can be discriminated against by coworkers, managers, or business owners.

The employment policies enforced by different governments (including the United States in particular) are put in place to protect individuals against employment discrimination when it involves (a) unfair treatment because of race, religion, sex (including pregnancy), national origin, disability, or age; (b) harassment by managers, coworkers, or others in the workplace because of one's race, religion, sex (including pregnancy), national origin, disability, or age; (c) denial of a reasonable workplace because of religious beliefs or disability; and (d) retaliation from employers because of worker complaints about job discrimination.

When looking at specific policies, one can see what potentially sweeping impacts they have on both the immediate and future life experiences of workers. The following two examples of the Equal Pay Act (EPA) and affirmative action are indicative of employment policies that seek to minimize disadvantages experienced on the basis of race, class, gender, or religion that historically have impeded one's occupational trajectories over the life course.

## THE AMERICAN EQUAL PAY ACT

In 1963 the U.S. Congress (under President John F. Kennedy [1917–1963]) passed the EPA to prohibit discrimination on account of gender in the payment of wages by employers. Within the text of the EPA, Congress included a clear and concise policy statement that briefly described the problems it intended to remedy. The clear statement of congressional intent and policy guiding the EPA's enactment was indicative of the congressional desire to fashion a broad remedial framework to protect employees from wage discrimination on the basis of gender. The Supreme Court has expressly recognized the view that the EPA must be broadly construed to achieve the congressional goal of remedying gender discrimination. Congress passed the EPA out of "concern for the weaker bargaining position of women," as a way to provide a remedy to discriminatory wage structures that reflect "an ancient but outmoded belief that a man, because of his role in society, should be paid more than a woman." The EPA protects both men and women. It also protects administrative, professional, and executive employees who are exempt under the Fair Labor Standards Act.

The EPA is the first law to suggest that the pay of women should be equal to men when their positions are equal. The purpose of the EPA is to secure equal pay for women who have jobs similar to men and to seek to eliminate discrimination and the depressing effects on living standards caused by reduced wages for female workers. Although sources indicate that women's pay is still approximately 25% less than men's pay even in 2008, the EPA is still considered one of the best attempts to help close the gap. At the same time, the EPA has one major practical limitation: It requires that men and women be given equal pay for equal work, yet in practice men and women are rarely employed in the same occupations.

The EPA states that employers may not pay unequal wages to men and women who perform jobs that require equal skill, effort, and responsibility and that are performed under similar working conditions within the same establishment. Among the criteria used to gauge equality are skills required for the job, amount of physical and mental exertion required on the job, degree of accountability required of workers, and physical work conditions such as workplace health hazards.

Despite the establishment of such equal pay policies, gender gaps in earnings persist in the United States and have important implications of gender equality over the life course. For example, there is a 17% gap between men's and women's pay for full-time work in the United States with a woman earning, on average, $80 for every $100 a man earns (Powell, 2006). When accumulated over the life course, these earnings gaps contribute to vast economic disparities in later life. In the United States, women comprise 59% of those age 65 and over; they account for 72% of the older poor (Powell, 2006). Older women's average income is roughly 50% lower than that of their male peers. These disadvantages are particularly pronounced for African American women; in 1990, a stunning 82% of older Black women were classified as poor or "near poor" (Powell, 2006). The case of race and gender disparities clearly illustrates how employment policies targeted toward young or working-age populations have implications for one's well-being over the life course.

## AFFIRMATIVE ACTION

A second key theme of employment policy relates to affirmative action. This can be defined as positive steps taken to increase the representation of women and ethnic minorities in areas of employment, education, and business from which they have been historically excluded.

In the United States, the effort to improve the employment and educational opportunities of women and members of minority groups has taken the form of preferential treatment in job hiring, college admissions, the awarding of government contracts, and the allocation of other social benefits. First undertaken at the federal level following the passage of the landmark Civil Rights Act of 1964, affirmative action was designed to counteract the lingering effects of discrimination that had taken place throughout history. The main criteria for inclusion in affirmative action programs are race, sex, ethnic origin, religion, disability, and age. The policy was implemented by federal agencies enforcing the Civil Rights Act of 1964 and two executive orders, which provided that government contractors and educational institutions receiving federal funds develop such programs. The Equal Employment Opportunities Act (1972) set up a commission to enforce such plans.

The establishment of racial quotas in the name of affirmative action brought charges of so-called reverse discrimination in the late 1970s. The U.S. Supreme Court placed important limitations on affirmative action programs in a 1978 ruling (*Regents of the University of*

*California v. Bakke*). Although the Court accepted such an argument in *Regents of the University of California v. Bakke*, it let existing programs stand and approved the use of quotas in 1979 in a case involving voluntary affirmative action programs in unions and private businesses.

In the 1980s the federal government's role in affirmative action was considerably diluted. In three cases in 1989, the Supreme Court undercut court-approved affirmative action plans by giving greater standing to claims of reverse discrimination, voiding the use of minority set-asides where past discrimination against minority contractors was unproven, and restricting the use of statistics to prove discrimination, because statistics did not prove intent.

The Civil Rights Act of 1991 reaffirmed the federal government's commitment to affirmative action. In the late 1990s, however, in a public backlash against perceived reverse discrimination, California and other states banned the use of race- and sex-based preferences in state and local programs. Several subsequent Supreme Court decisions (e.g., *Adarand Constructors v. Pena* in 1995 and *Hopwood v. Texas* in 1996) imposed further restrictions. A 1995 Supreme Court decision placed limits on the use of race in awarding government contracts; the affected government programs were revamped in the late 1990s to encompass any person who was "socially disadvantaged." In 1996 California voters passed Proposition 209, which prohibited government agencies and institutions from discriminating against or giving preferential treatment to individuals or groups on the basis of race, sex, color, ethnicity, or national origin. Similar measures were subsequently passed in other states. In 2003, in two landmark Supreme Court rulings involving admission to the University of Michigan and its law school, the U.S. Supreme Court reaffirmed the constitutionality of affirmative action but ruled that race could not be the preeminent factor in such decisions.

The effectiveness of affirmative action programs has been widely debated. Conservative scholar and writer Thomas Sowell (2004) asserted that affirmative action policies have not worked. Sowell argued that such programs encourage "nonpreferred" groups to designate themselves as members of "preferred" groups (i.e., primary beneficiaries of affirmative action) in order to take advantage of group preference policies. Further, he argued that such policies tend to benefit primarily the most fortunate among the preferred group (e.g., wealthy Blacks), often to the detriment of the least fortunate among the nonpreferred groups (e.g., poor Whites).

Sowell (2004) further suggested that affirmative action programs reduce the incentives of both the preferred and nonpreferred to perform their best—the former because doing so is unnecessary and the latter because it can prove futile—thereby resulting in net losses for society as a whole. Controversially, Sowell suggested these programs engender animosity toward preferred groups as well as on the part of preferred groups themselves, whose main problem in some cases has been their own inadequacy combined with their resentment of nonpreferred groups who—without preferences—consistently outperform them.

However, the majority of social scientists conducting research point to evidence showing that affirmative action opens professional and educational doors to persons who have historically lacked access to such opportunities. In doing so, these programs allow individuals to explore their untapped talents. Yet society also benefits, by fostering and ultimately utilizing the talents of all persons—regardless of their gender or racial and ethnic background.

The extent to which affirmative action has expanded minority employment in skilled positions is clear (Estes, Biggs, & Phillipson, 2003). The female-to-male ratio of earnings of full-time, year-round workers was roughly stable at around 60% from the early 1900s until the mid 1970s. In 1993 earnings of women who worked full-time, year-round had risen to 72% as much as men. After adjusting for differences in education, experience, and other factors, the wage gap is reduced by about half (i.e., the adjusted ratio is approximately 85; Powell, 2005). An increase in women's work experience and a shift into higher-wage occupations are the major causes of their improved economic position relative to men. The decline in higher-paying manufacturing jobs, which is partly responsible for the decline in the earnings of less-skilled men, has also contributed to the narrowing of the male-female wage gap. Nevertheless, a substantial part of the improved earnings of women cannot be explained by these factors and probably reflects positively how well affirmative action is working (Estes et al., 2003).

Scholars also argue that affirmative action is still needed, yet they also recognize the difficulty in proving beyond a doubt that a worker is the target of unfair or discriminatory practices. Psychological research documents that almost all people have trouble detecting a pattern of discrimination unless they are faced with a blatant example or have access to aggregated data documenting discrimination (Dixon & Rosenbaum, 2004). Affirmative action programs call for the collection of clear data on racial and gendered patterns of hiring and promotion, among other information. These aggregated data, in turn, can help decision makers to avoid or correct imbalances before they become widespread or harmful.

These data are particularly important because it is difficult to document that discrimination is occurring

simply by looking at statistics showing that women or ethnic minorities have a poorer quality job or lower earnings than their male and White peers, respectively. For example, Joseph LeFevre (2003) argued that a large proportion of minorities and women are locked into low-wage and low-prestige jobs, yet he attributed this over-representation to a factor other than discrimination: LeFevre reasoned that these two groups have been disproportionately affected by current trends in workforce downsizing. Service-oriented industries disproportionately employ women and minorities, and these industries are particularly susceptible to downsizings and undesirable working and pay conditions. However, many employment policies—taken together—do aim to ensure equality of opportunity and, ultimately, equality of outcome for all workers.

### FUTURE IMPLICATIONS OF EMPLOYMENT POLICY

Achieving a balance between economic efficiency and social equity is the ultimate goal of employment policy. Policies are intended to meet the needs of the employers by maintaining economic efficiency yet at the same time must also contribute to social equity by providing workers with fair and equitable benefits so that they can fund and enjoy healthy living. Employment policies also affect adults even after they have exited the workforce and enter retirement. Chris Phillipson (1998) observed that the retirement experience is linked to the timing of economic reduction of wages and that enforced withdrawal from work has made many older people in the United States financially insecure.

It could be argued that the biggest issue affecting employment policy may not come from the nation-state or their policy makers but from global forces. Globalization has created economic conditions that both hinder and facilitate the implementation of employment policies, thus transcending the power of the nation-state (Estes et al., 2003). Phillipson (1998) has noted four ways that globalization shapes both the need for and content of nation-states' employment policy. First, international competition, typically from newly industrialized countries, will cause unemployment growth and increased wage disparity for unskilled workers in industrialized countries. Low-cost imports from low-wage countries exert pressure on the manufacturing sector in industrialized countries, and foreign direct investment is attracted away from the industrialized nations toward low-waged countries. Second, economic liberalization may result in increased unemployment and wage inequality in developing countries. This happens as job losses in uncompetitive industries outstrip job opportunities in new industries. Third, workers may be forced to accept worsening wages and work conditions, as a global labor market results in a "race to the bottom" (Phillipson, 1998). Finally, globalization reduces the level of autonomy exercised by the nation-state. The reach of globalization is expansive, and virtually no worker is untouched. For example, in industrialized countries, an estimated 70% of workers are employed in the service sector. Ultimately this is a result of changes and trends of employment, an evolving workforce, and globalization that is represented by a more skilled and increasingly more diverse labor force, which is growing in nonstandard forms of employment policy and practice (Phillipson, 1998).

**SEE ALSO** Volume 2: *Careers; Employment, Adulthood; Racism/Race Discrimination; Sexism/Sex Discrimination;* Volume 3: *Ageism/Age Discrimination.*

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## POLICY, FAMILY

The goal of family policy is to promote the well-being of families (Zimmerman, 2001). At a minimum, family policy is targeted explicitly at the formation and structure of families (e.g., laws concerning adoption or divorce), family rights, and the functioning and well-being of families. However, because many policies not designed to overtly target families ultimately have implications for families, family policy may be conceptualized in broader terms (Zimmerman, 2001). For this reason, family policy

is sometimes considered a policy perspective instead of a specific type of policy (Bogenschneider, 2002). Family policy is pertinent to family members of all stages of the life course (e.g., children, parents, aging and elderly parents) and, as discussed later in this entry, may have important ramifications for a person's progression through his or her life course.

Because of changes in the economy and both family structure and process since the late 1960s, policies aimed at supporting working families and facilitating parents' employment are particularly important in the United States. These work–family policies include federal, state, and local government policies and employers' "family-friendly" policies. The focus here is on the former, specifically federal work–family policies. This review of federal work–family policies emphasizes policies attentive to parents and children, but many of the policies also pertain to elderly parents, sick relatives, and dependents in general.

## TYPES OF WORK–FAMILY POLICIES IN THE UNITED STATES

Government work–family policies include family leaves providing employees time off from work for caregiving, publicly supported childcare programs, other forms of support for child and dependent care (e.g., tax breaks), and regulation of work time and work arrangements (Kelly, 2006; Smolensky & Gootman, 2003). Scholars have documented how few policies the United States has in place, particularly in contrast to European countries (e.g., Gornick & Meyers, 2003). Nonetheless, although U.S. policy is relatively limited in this regard, several features of its current work–family policy landscape are important and noteworthy.

## FAMILY AND MEDICAL LEAVE

In 1993 the Family and Medical Leave Act (FMLA) was signed into law by President William J. Clinton, following years of Congressional debate and two vetoes by President George H. W. Bush (Elving, 1995). The law requires employers to allow employees (both men and women) to take up to 12 weeks of unpaid leave to recover from their own serious illness or to care for a baby, a newly adopted child, or a seriously ill relative. The law applies to work establishments with at least 50 workers at one site (or within a 75-mile radius), and only employees working at least 1,250 hours over the past year are eligible for FMLA leaves.

Prior to the FMLA, temporary disability insurance policies in some states afforded some mothers partially paid leaves when they were physically recovering from pregnancy and birth; feminists disagreed on whether to pursue maternity leave through sex discrimination claims, which relied on an analogy between pregnancy and other disabilities, or to advocate for maternity leave on the basis of a mother's need to care for her infant (Williams, 2000). This came to be known as a debate between equal or special treatment strategies. These temporary disability insurance policies remain an option for mothers who are covered by such a plan (Kelly & Dobbin, 1999; Smolensky & Gootman, 2003). Advocates considered the FMLA groundbreaking, however, because it improved job security for employees facing demanding health and caregiving situations and recognized both women's and men's caregiving. Nonetheless, the FMLA has significant limitations.

First, the FMLA does not cover all work establishments and employees. Only 11% of U.S. work establishments are estimated to fall under the FMLA; these establishments, however, employ just over half of the total workforce (Cantor et al., 2001). To help address this shortcoming, legislation in a subset of states extends FMLA's coverage to establishments with fewer than 50 employees (Institute for Women's Policy Research, 2007).

Another concern is that FMLA leaves are unpaid, which reduces the usefulness and value of the law for some workers. Research has shown that the majority of employees in need of a leave cannot afford to go without the pay, and among those who take a leave, a portion have to truncate their leave because of financial constraints (Cantor et al., 2001). Scholars also have raised concerns about the implications of unpaid leave for gender equity because men in general are less likely to take unpaid leave (Kelly, 2006). One state, California, offers its residents a paid family leave program, providing partial paid leave (up to 55% of wages) to an employee for up to 6 weeks to care for a newborn, a newly adopted child, or an ill family member. The benefit is funded through a payroll tax paid by employees contributing to the state's disability program (California Employment Development Department, 2005).

A final limitation to the FMLA concerns employer compliance with the federal law (Albiston, 2005; Kelly, 2004). Employers may violate FMLA's requirements by not allowing an employee to take the full 12 weeks of leave or by not fully or clearly disclosing employees' rights under the law. An employer also may fail to maintain an employee's health insurance coverage during a leave or may somehow penalize workers following a leave. Kelly's 1997 survey of employers found that about a third of workplaces covered by the FMLA violated the law in terms of the length of leave permitted for paternity or maternity reasons (Kelly, 2004). In a survey conducted 3 years later and using a different questionnaire, 13% of covered employers reported that they did not permit up to 12 weeks of leave for any FMLA reason (Cantor et al., 2001). Such violations likely speak to gaps in employers'

## FAMILY AND MEDICAL LEAVE ACT

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understanding of the law as well as their concern that leaves will make it difficult to meet business goals or create burdens for other workers.

Enforcement of the FMLA is limited in that it is largely reactive, focused on responding to reports of potential violations (e.g., employee complaints to the U.S. Department of Labor). Although the FMLA mandates that covered employers maintain records to comply with the law, federal monitoring is minimal because the law does not require employers to submit records to the Labor Department regularly. In fact, employers are not required to submit records unless requested by the department, and without reasonable cause, the department may not ask employers to submit such records more than once during a year (U.S. Department of Labor, 2008).

### CHILD/DEPENDENT CARE

Working parents must find care for their children for the hours the parents are at work. Many American parents rely on family members, such as grandparents or older children, for childcare, or spouses work complementary hours so that a parent is usually with the children (Casper, Hawkins, & O'Connell, 1994; Presser, 1988). Beginning in the 1980s, more parents sought nonfamilial sources of childcare, such as private childcare providers or employer-based centers (Casper & Bianchi, 2002).

With the exception of national emergencies such as the Great Depression and World War II, when the U.S. federal government subsidized childcare centers (Auerbach, 1988; Michel, 1999), the federal government historically has not directly funded childcare for the general public. Instead, the United States provides different types of support for families at different income levels (Kamerman & Kahn, 1987, 1997; Michel, 1999), ranging from family tax abatements, tax reductions for employers who provide childcare benefits to their employees, and subsidies for some low-income families. Given their wide coverage, family and business tax breaks represent the broadest childcare policy in the country. In fact, tax expenditures were the most expensive childcare policy for much of the 1980s and 1990s (Kelly, 2003). Prior to an increase in subsidies for low-income families (discussed more below), the federal government depleted more funds through childcare-related tax reductions than it spent directly funding or subsidizing childcare programs.

**Childcare-Related Tax Deductions for Families** Federal income tax regulations offer at least two childcare-related reductions to qualifying families. The first is a nonrefundable tax credit, the Child and Dependent Care Credit, aimed at offsetting child/dependent care expenses incurred by working families. A tax credit reduces the amount of tax owed by an individual or family; a nonrefundable tax credit cannot lower the tax below zero and therefore may not result in a refund. Since 1954, federal tax credits have been available for a portion of employment-related child and dependent care expenses. Although income level is not a factor in qualifying for the credit, the amount of the tax credit varies inversely with income to provide more support to low-income households.

Several factors, however, limit low-income families' ability to benefit from the tax credit, and, in fact, the credit is most often used by middle- and upper-income families (Forry & Anderson, 2006). For example, if a family's earnings are so low that it does not have to pay taxes, the tax credit is by definition not available to the family. Further, the nonrefundable nature of the credit prevents low-income families from receiving the benefit if their tax credit exceeds the amount they owe in federal income taxes.

The second childcare-related tax reduction is a Dependent Care Expense Account (DCEA), also known as Section 125 or ''cafeteria'' plans, dependent-care assistance plans, flexible spending accounts, or tax-free or pretax spending accounts. Such an account is available to individuals whose employers have established a DCEA as an employee benefit and allows employees to set aside a share of their income each year to pay for qualified child- or dependent-care expenses. The funds placed in the account (up to $5,000 per year) are not considered taxable income, which therefore reduces a person's taxable income, resulting in a lower tax burden for participants. Employers also save on their Social Security and Federal Insurance Contributions Act (FICA) contributions, which are calculated based on an employee's taxable earnings (Beam & McFadden, 1996). Access to this tax reduction is contingent on an employer offering the program. An estimated 30% of larger companies (with 50 or more employees) offer these accounts (Kelly, 2006). Although the tax code requires that benefits such as this one be available to all employees (Employee Benefit Research Institute, 2005), higher-income individuals are more likely to benefit from a DCEA, primarily because they are more likely to work for larger employers with more generous benefit packages (Kelly, 2006).

**Government Encouragement of Employer-Based Childcare** The federal Economic Recovery Tax Act of 1981 was intended to encourage the establishment of employer-based childcare centers by offering tax reductions to employers who provide workplace-based child- and dependent-care benefits. Under this law, employers are allowed to deduct childcare benefit-related expenses from their income tax (Employee Benefit Research Institute, 2005). More recently, the Economic Growth and Tax Relief Reconciliation Act of 2001 granted another tax reduction to employers for providing childcare services or referrals. Employers may earn a tax credit (up to $150,000) for a portion of the expenses incurred in setting up and operating a workplace childcare center for employees (up to 25% of expenses) and providing childcare resources and referrals to employees (up to 10% of expenses). Still, workplace childcare centers continue to be rare in the United States. In a 2005 national survey of employers, only 7% reported a childcare facility at or near the work site (Bond, Galinsky, Kim, & Brownfield, 2005).

**Head Start Program** The federal government's longest-running involvement with childcare has been via the Head Start program, which during fiscal year 2007 enrolled more than 900,000 children up to age 5 in the United States (Administration for Children and Families [ACF], 2007b). Initiated during President Lyndon B. Johnson's War on Poverty in the 1960s and most recently reauthorized by President George W. Bush in December 2007 for 5 years, Head Start is intended to better prepare low-income and disadvantaged preschool children for school by providing childcare and other services. Head Start's mission is to promote ''school readiness by enhancing the social and cognitive development of children through the provision of educational, health, nutritional, social and other services to enrolled children and families'' (ACF, 2007a). Historically, Head Start targeted children ages 3 to 5 years. As part of the reauthorization of Head Start in 1994, Early Head Start, a companion component for children younger than 3 years of age was added. Most children in Head Start are enrolled in a full-day or half-day program at a local center or facility (ACF, 2005).

Although Head Start has served a vast number of children—24 million since its inception in 1965 (ACF, 2007b)—the program has its shortcomings. First, not all children who are eligible are served by the program. In 2001 it was estimated that only 50% of eligible children ages 3 and 4 years were being served under Head Start (Currie, 2001). Eligible children may not be enrolled for a number of reasons, including inadequate program funding or program outreach efforts, language/cultural obstacles, or parents' preferences for other early education and childcare providers. Moreover, if the program is a part-year and/or part-day program, it may be only minimally helpful to a working family (Gornick & Meyers, 2003; Smolensky & Gootman, 2003).

**Temporary Assistance to Needy Families Program and Other Key Federal Childcare Funding Sources** Introduced as part of the 1996 welfare reform legislation, Temporary Assistance to Needy Families (TANF) replaced Aid to Families with Dependent Children and other earlier welfare programs. As part of the reform, the federal government terminated federal entitlement to welfare assistance yet continued to fund welfare assistance to families in need through the new TANF program. Established as a federal grant program for states, TANF is a combined federal and state effort designed to provide temporary income assistance to families. TANF was reauthorized for 5 years by Congress and President George W. Bush in 2006.

The goals of TANF are to (a) assist needy families so that children can be cared for in their homes; (b) reduce the dependency of needy parents by promoting job preparation, work, and marriage; (c) prevent out-of-wedlock pregnancies; and (d) encourage the formation and maintenance of two-parent families (ACF, 2006a). The program provides up to 5 years of income assistance, work opportunities, and other services (including childcare) to qualified families as long as they meet specific employment requirements. TANF has

evolved into a significant source of public childcare funding (Smolensky & Gootman, 2003). The program supports childcare in the form of direct expenditures on childcare for families receiving TANF payments and in the form of transfers to the Childcare and Development Fund (CCDF) and Social Services Block Grant, which are additional federal block grants to states that provide childcare services to eligible families.

Although the federal government has increased its childcare funding to low-income families (ACF, 2006b) since 1996, and the reauthorization legislation signed in 2006 further increased this funding, there are several limitations to federal funding of childcare. First, not all eligible low-income children are served. It has been estimated that as few as 10% to 15% of families eligible for CCDF receive benefits (Smolensky & Gootman, 2003), and waiting lists for benefits exist. Second, the payments/vouchers provided to families to pay for care are not necessarily adequate given actual childcare costs. Finally, quality of care is a critical issue. For example, under the CCDF, although providers must meet state health and safety requirements, only a small percentage of CCDF funds must be used toward improvements in the quality of care. The CCDF "does not specify or control the quality of care that children receive" (Smolensky & Gootman, 2003, p. 251).

## REGULATION OF WORK TIME AND WORK ARRANGEMENTS

Among work–family policies, work-hour regulation may have the broadest reach because manageable and flexible work hours are important for all families regardless of their specific work and family demands. "[W]orking-time regulations can help allay work–life conflicts that occur across the life course, among parents whose children are young and older, among those caring for ill or disabled relatives, and even among those workers who do not have many family demands" (Kelly, 2006, p. 109).

In the United States, the main law regulating work time is the Fair Labor Standards Act (FLSA) of 1938. Although the law does not overtly define "full-time" and "part-time" work, it implicitly does so by defining overtime as hours worked beyond 40 hours per week. The Fair Labor Standards Act guarantees a higher wage for overtime hours (1.5 times the normal wage) for employees who are covered by the law and work overtime during a given week. The percentage of workers who are exempt from the law, however, has grown (Gornick & Meyers, 2003) due to changes in the law catergorizing more workers as exempt and increases in labor market participation in exempt jobs. Furthermore, the law does not protect workers from mandatory overtime. In contrast, policies elsewhere in the world (e.g., the European Union) cap working hours, including overtime, and require employers to consider flexible work arrangements for any employee who requests such an arrangement (Kelly & Kalev, 2006).

## RESEARCH ON THE IMPACT OF WORK–FAMILY POLICIES ON FAMILIES, PARENTS, AND CHILDREN

As discussed above, work–family policies are intended to facilitate parents' employment and to support members of working families. A growing body of research has examined the effects or consequences of the types of policies described here for families, adults, and children. Research has centered on the impact of work–family policies in several areas: women's employment, wages and equality, and child development.

Research suggests that there is no straightforward relationship between work–family policies and labor force participation among women. Family leaves increase women's employment rates, but, not surprisingly, these findings vary by leave duration (e.g., Gornick & Meyers, 2003). Overall, in the United States, where FMLA leaves are unpaid and short (compared to leaves required in other countries), family leaves have had little impact on overall women's labor force participation (Waldfogel, 1998a). Other U.S. research on maternity leaves has shown that access to such leaves is associated with several employment outcomes among women: the continuation of their involvement in the labor force following childbirth, their retention of the same job following childbirth, and a faster return to work (Estes & Glass, 1996; Glass & Riley, 1998; Hofferth, 1996).

Childcare costs also affect parents' employment decisions. Higher childcare costs are associated with a reduction in women's labor force participation (Gornick & Meyers, 2003). For this reason, the presence of public programs subsidizing childcare costs would be expected to increase women's employment rate, and cross-national research has shown this to be the case (Pettit & Hook, 2005; Stryker, Eliason, & Tranby, 2004).

With regard to women's pay, research has shown that mothers who use work–family policies and stay in the workforce following childbirth have higher wages than mothers who leave the labor force and later return (e.g., Waldfogel, 1998b). Wage consequences from a break in employment are not just short term but continue over time, resulting in a cumulative disadvantage in lifetime income (Jacobsen & Levin, 1995; Noonan, 2001).

Finally, in terms of the impact of work–family policies on children, scholars have examined the effects of policies supporting mother's employment, family leaves, and childcare. Overall, work–family policies have a

positive impact on children (Gornick & Meyers, 2003). One study (Kamerman, Neuman, Waldfogel, & Brooks-Gunn, 2003), for example, found that policies supporting mothers' employment had an indirect but significant effect on children's well-being by increasing overall family income. As documented for decades, poverty is associated with a variety of negative child outcomes such as poor health, slower cognitive development, and lower school achievement (e.g., Duncan & Brooks-Gunn, 1997).

Sufficient family leaves following a birth of a child can facilitate breastfeeding and child–parent bonding as well as enhance maternal health (Galtry, 1997; McGovern et al., 1997). Longer family leaves that allow parents to be home with their children or to work part-time during the first year of life also are important because research has shown that children who spend more time with their mothers during the first year score better on cognitive tests (Gornick & Meyers, 2003). For this reason, longer family leaves may be beneficial to children's development and school achievement. Unpaid leaves, however, could be associated with poor outcomes for children if such leaves cause significant financial strain on the family. Finally, for preschool children, studies have highlighted the positive relationship between high-quality childcare and children's development, school readiness, and academic performance (e.g., Kamerman et al., 2003).

## FUTURE DIRECTIONS

Research has yielded useful information on the implications of public work–family policies for working families, but important policy and research questions remain. More attention needs to be paid to the linkages between work–family policies and other areas of family policy, including supports for low-income families. How can public policies better support low-wage working parents, who have particular challenges but less access to family leaves, childcare benefits, and flexible work arrangements?

Other questions pertain to the consequences of work–family policies for broader outcomes, such as career advancement, health status and well-being, and community involvement. Beyond wages, are there negative career consequences (e.g., regarding job security and promotion) for using family leaves (e.g., Glass, 2004)? Can public policies be constructed so that workers use the available options without fear of career reprisals? Finally, what is the connection between work–family policies (or the absence thereof) and the health and well-being of parents, caregivers, and their dependents? Research provides some evidence that work–family policies may have benefits beyond the immediate family and work organization because employees with fewer work–family conflicts have better health, are better able to attend to the health and development of their families, and are more likely to be involved in their communities (Bianchi, Casper, & King, 2005; Bookman, 2004).

**SEE ALSO** Volume 1: *Child Care and Early Education; Child Custody and Support; Policy, Child Well-Being;* Volume 2: *Abortion; Cohabitation; Divorce and Separation; Fatherhood; Motherhood; Noncustodial Parents; Poverty, Adulthood; Work-Family Conflict;* Volume 3: *Long-term Care.*

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# POLICY, HEALTH

Health policy is a type of social welfare intervention deliberately designed to improve and preserve the health of individuals and populations. Sociologists who study health status and the life courses of individuals and

families have documented how experiences that seem far removed from the domain of health policy nonetheless have a profound influence on health-related outcomes. Although health policies formally structure the relationships between individuals and health systems, other institutional realms, such as education, housing, the workplace, and the community, form the context within which good (or ill) health develops and is experienced.

There are two major endeavors governed by health policy. The first is population-level interventions that promote public health. The need for publicly financed health policies is taken for granted, even in the most market-oriented societies. The second health policy endeavor structures national health care systems, shaping the cost, quality, and access to individual health care. Individual entitlement to basic health care is a widely accepted right in both developed and developing nations. Still, national perspectives on what services basic health care covers and how a right to basic care is enacted and paid for create wide variations in the details of national health policies around the world.

## DEFINING HEALTH AND HEALTH POLICY

To grasp what constitutes health policy and what does not, it is first important to understand the parameters used to define health. This is because health and health policy, considered broadly, cover such an extensive range of potential actions and interventions that they can be surprisingly difficult to define precisely. In the mid-20th century, physical health and illness were generally viewed as shaped by biological processes and health care. Current definitions are much more complex. For example, one authoritative international source defines health as the state of physical, mental, and social well-being, not just as an absence of disease (World Health Organization [WHO], 1994). In a similar vein, *Healthy People 2010*, a program established by the U.S. Department of Health and Human Services (2000) to minimize or eliminate health disparities in the United States by 2010, notes that the complex factors shaping health disparities demand interventions on multiple fronts, including improved housing, education, employment, and health policies.

Health policy, in the most general sense, is the set of rules, regulations, and procedures that countries use to explicitly coordinate national practices, investments, and systems that are directly health related. Policy makers and stakeholders in the health care system negotiate health policy legislation and the regulations that determine national levels of health expenditure, decide how public and private spending and medical care provision are balanced, and prioritize actions to change health care system arrangements. At the individual level, national health policies determine the cost, quality, and access to health care and medical services faced by individuals and their families. At the population level, health policies govern public health initiatives, workplace and environmental safety regulations, and the specifics of national health care system arrangements and financing. The overarching purpose of health policies is to improve individual well-being and population welfare by enacting programs and practices to preserve health and prevent disease.

Only governments can efficiently undertake collective public health measures on the scale needed to preserve population health. These activities range from ensuring clean food and water supplies, to regulating the safety and efficacy of pharmaceutical products, to implementing population immunization programs and responding to epidemics. Although some countries (especially developing countries) devote more attention and the largest proportion of national expenditures to public health, most citizens in developed countries experience national health policies as individual health care consumers interacting with health care professionals. Most are less aware of public health activities such as safe water supplies and universal vaccination programs, which are collective, behind the scenes, and indirectly experienced.

Despite current definitions of health, which emphasize the importance of policies from other social policy domains in shaping health (such as in *Healthy People 2010*), and despite the emphasis on social inclusion and well-being by the WHO, only policies that directly impact individual, physical, and mental health are conventionally considered within the rubric of health policy. Thus, education, housing, and the workplace factors are not conventionally considered health policies, although such policies would obviously influence individual health status over the life course. Perhaps because the value of most public health measures is taken for granted, or because policy making is most active on the second front, most people who study health policy focus on the relationships between the health care system and individuals accessing medical care.

## VALUES AND HEALTH POLICY

Although the purpose of health policy as a way to preserve health and prevent disease seems universal, the specifics of national health policies vary substantially. Each country's health policies reflect its distinctive values and cultural traditions, its unique array of economic, demographic, and political circumstances, and the particular financing and organizational arrangements of health care systems. Nationally, health policies encompass the political decisions that generate health-related laws and regulations, reflecting "more general perceptions about what is fair or important or doable (or all three) in a

particular culture, at a particular time, in a particular place" (Stevens, 2006, p. 2). When considering the capacity for health policy to address particular health needs, feasibility depends not only on the concrete resources and infrastructure available for implementation, but on the cultural norms and dominant value systems of the society.

As prominent medical sociologist David Mechanic (who has studied health policy and its outcomes for his entire career), Lynn Rogut, David Colby, and James Knickman (2005) have observed, debates about health policy, regardless of where they occur, are often driven by moral and ideological positions, rather than by evidence about which particular policies could be most effective for the most people. Instead, contests over health policy are often fueled by disagreements over "personal versus collective responsibility, government versus self-help, individual fault versus social causation" and the merits of designing health policies for populations that are regarded as "worthy versus unworthy" (Mechanic et al., 2005, p. 2).

Both the WHO (1994) and the U.S. Department of Health and Human Services (2000) define health and the policies that can influence it based on values of justice, equity, and social inclusion. Yet one of the values reflected in the U.S. health care system is the primacy of individual risk over government responsibility (O'Rand, 2003) and an emphasis on individual fault rather than social causation in explaining illness. Nonetheless, values that presume collective responsibility for public health and individual entitlement to health care are elsewhere widely accepted across the political spectrum and in both the developed and developing world. Broad-based political support for redistributive health policy—whereby resources are redistributed toward the most vulnerable, from the lucky healthy to the unlucky sick—is typically greater than for redistribution in other social policy domains. Regardless of political preferences, most stakeholders and policy makers acknowledge that publicly financed public health measures are essential and that routine access to individual health care should be guaranteed. Still, particular national perspectives on what is appropriate and feasible (given cultural realities and resource constraints) in the realm of public health and what constitutes adequate access to basic individual care is expressed in the myriad variations of health policies observed throughout the world.

One fundamental question that distinguishes how values are expressed differently among national health care systems is, "Who is responsible for paying for and providing health care?" The answer varies cross-nationally, but most developed countries provide universal entitlement to health care for all citizens, from cradle to grave. Some countries, such as the United Kingdom and Spain, have comprehensive national health services that are supported by general taxation; most medical care is delivered by health professionals employed in the public sector. Canada and the Scandinavian countries depend on universal, publicly financed national health insurance, with most health care providers working in the private sector. Other countries, such as France and Germany, complement public programs with mandated employment-based insurance to guarantee universal access.

Alone among developed countries, the United States has no guarantee of universal access to care (see sidebar). Instead, a patchwork of public programs and private insurance structure individuals' access to medical care. Without a national guarantee of health insurance for infants, children, or working-age adults, many nonelderly working individuals and their families depend on private employment-based health insurance; others go without any health insurance at all. Very poor mothers (but not very poor fathers), their infant and preschool-age children, and some segments of the permanently disabled population are covered by Medicaid. Medicaid is a state-federal health insurance program for the poor that applies strict income and asset tests to determine eligibility for coverage. Since the mid-1990s some states have relaxed income eligibility rules and expanded Medicaid insurance coverage to many more low-income children. However, this expansion of public health insurance for children has not occurred evenly across the country, and states encountering fiscal difficulties often withdraw the expanded coverage. Individuals who are over age 65 are eligible for Medicare, a federal program of nearly universal health insurance for the elderly. Medicare covers many of the acute medical care needs for elderly Americans but does not provide long-term care. Thus the United States is unique in the role that life course circumstances—especially the interaction of age with other individual and family characteristics—play in how or whether individuals are likely to gain routine entrance into the health care system and who will pay the bill when they do.

In countries where universal access is guaranteed, the life course basis of health policies may not always be as obvious as in the United States, yet they certainly exist. Countries may enact specialized initiatives to target particular health problems or risks most prevalent at particular life course stages or for particularly vulnerable subpopulations. For example, public health policies may discourage smoking initiation, educate about sexually transmitted diseases, or provide special prenatal care programs for vulnerable pregnant women—policies geared mostly toward the health concerns of teenagers and young adults. Alternatively,

## NATIONAL HEALTH INSURANCE

National health insurance (HI) guarantees universal access to basic health care for entire populations. Countries with multi-payer national HI systems, such as Germany, combine compulsory, private insurance (usually employment-based) with public programs for individuals not privately insured. Canada's single-payer HI system provides government-administered coverage for all citizens. Among industrialized democracies, only the United States lacks guaranteed access to health care for all and is distinctive in its heavy reliance on voluntary private HI. Working-age Americans and their families typically are covered by employment-based group HI. Population groups deemed by private insurers as too risky to insure usually rely on public programs for HI coverage: Medicare (HI for the elderly), Medicaid (HI for the poor), and myriad smaller public programs (e.g., coverage under the Veteran's Administration, Indian Health Service, prison health care) account for nearly half of U.S. health care spending. Nearly 47 million Americans lack health insurance coverage. Advocates of national HI note three advantages: (a) everyone has access to basic health care, (b) administrative costs are low, and (c) health costs can be controlled by managing supply. Critics argue that national HI compromises the benefits of private sector HI, including (a) investment in medical innovation, (b) consumer choice, and (c) cost-consciousness that moderates wasteful health care consumption.

policy attention may focus on implementing widespread monitoring of midlife adults to catch the onset of chronic conditions or to preserve mobility or address the risks of polypharmacy among the elderly. In countries where routine access to health care is an entitlement, access to health care in the first place is not shaped by life course influences to the extent that it is in the United States, but the focus of health investments and health policy outcomes certainly are.

### THE EFFECTS OF HEALTH POLICY ON LIFE TRAJECTORIES

Historically, the most dramatic improvements to overall population health and to improving and prolonging the lives of individuals were due to advances in public health. Although modern medicine has made stunning advancements that improve health—ranging from the discovery of antibiotics and antivirals, to increasingly effective disease interventions, to organ transplants—the health gains of the most broadly applied medical intervention pale in comparison to the continuing contributions of public health. It is for this reason that, in developing countries, individuals' life chances are often enhanced more by population-level public health policies than by policies relating to individual health care. In developed countries, where public health policies are well-developed and their impact is taken for granted, most health policy attention is usually paid to decisions affecting individual-level interventions and outcomes (such as reforms to spending or arrangements of national health care systems) rather than to population-level initiatives.

Yet precisely how individual-level health policy is implicated in shaping life course trajectories is not entirely clear. It does structure the capacity for individuals to access and benefit from medical advances. Where universal health insurance is provided, there are no financial barriers to accessing medical care, minimizing access and care differences between advantaged and disadvantaged groups. In the United States the fragmented public–private health insurance system multiplies the advantages of some by easing access to health care and reduces the advantages of others by restricting access. Still, in the United States, acute illness and accidents are treated even among the uninsured; it is routine checkups and preventive care that are missed when access to medical care is restricted due to lack of insurance. Yet even elsewhere, where health policies remove financial barriers that impede access to medical care, health disparities begin early in the life course and persist (with rare exceptions) over its span. This emphasizes the complexities of health outcomes, which involve much more than straightforward interactions between individuals and medical care.

Despite significant medical advances throughout the 20th century, low socioeconomic status (SES) is everywhere associated with more adverse health outcomes across all major health conditions. The association between SES and health occurs in both directions. First, an individual's health status impacts his or her ability to work, income level, and wealth built over the life course. Second, increases in income and education are strongly correlated with increases in measured health (Braveman et al., 2005). Research indicates that, in most instances, the impact of SES on health outcomes strengthens across the life course, so that current socioeconomic advantage or disadvantage impacts an individual's immediate and longer-term health. Scholars use this concept of cumulative (dis)advantage to understand how the effects of risk factors for disease accumulate over an individual's life course (Ferraro & Kelley-Moore, 2003).

Many researchers have attempted to determine what specific aspects of SES lead to differential health outcomes. One vehicle through which SES impacts health is individuals' exposure to stress. Individuals with low SES experience, on average, more stressful and negative major life events throughout their lives, and the exposure to such events is associated with higher risks of ill health and death. Bruce Link and Jo Phelan (1995) argue that SES is a fundamental cause of health disparities, because an individual's SES is linked in so many different ways to his or her capacity to gain access to and mobilize resources when needed. Access to important resources, whether knowledge, money, social support networks, or other advantages linked to SES, may explain why the association between SES and health is so persistent across so many different disease outcomes, and why the association between low SES and poor health outcomes persist even when disease risk factors change. The *fundamental cause* perspective explains how an individual's social and economic positions structure access to resources that can either prevent exposure to risks for disease or can be used to shield the effects of disease when it does occur.

Alternatively, lack of resources is implicated in exposure, risk, and shortage of resources to effectively deal with health conditions and setbacks (Link & Phelan, 1995). SES as a fundamental cause of health represents not only a cross-sectional risk but a life course one as well. Most research indicates that low SES (specifically education and income) contributes to cumulative disadvantage over the life course—diverging gaps in physical health among individuals of varying SES at older ages. However, some research indicates that for a handful of conditions, age may be a "leveler" in that some conditions (such as depression) appear to converge across SES groups with increasing age (Kim & Durden, 2007). A tentative explanation for this emphasizes the role of pensions (e.g., Social Security in retirement) in closing some of the gap between incomes and health policy.

According to the *life course health development* model, SES in childhood and early adulthood sets individuals on differing health trajectories (Halfon & Hochstein, 2002). These differing health trajectories differentially expose individuals to experiences that may either buffer or amplify the risks for disease, resulting in greater health disparities as individuals grow older. Children from poor families experience different sets of risks from children in more affluent ones, starting them on a trajectory of life course outcomes that magnify disadvantage over time (Wagmiller, Lennon, & Kuang, 2008). Childhood and family social relationships are associated with later physical and mental health outcomes (Institute of Medicine, 2002), emphasizing the importance of childhood experiences even in mid- and later life health outcomes.

In none of these instances could conventional public health or individual health policies intervene to do much to minimize or ameliorate the life course health risks posed by such early exposures to adverse environments. Rather, Linda George (2005) called for a "simple" health policy approach to "redistribute income and educate children to their maximum potential" (p. S138) and to devote more attention to fixing social institutions than people. Research shows that economic hardship over the life course has cumulative effects on health over time (Hayward, Crimmins, Miles, & Yang, 2000), indicating that alleviating hardship through education (which mitigates health risks and contributes to resilience) and minimizing income inequality may have the most potential to be effective health policies—considered from a life course perspective.

## GAPS IN KNOWLEDGE AND ISSUES TO BE RESOLVED

Even when health policies are specifically designed to do so, they do not necessarily benefit the most vulnerable. To the extent that health policies target individuals rather than groups or populations, the initial outcome of a policy intended to improve conditions for the least advantaged may, paradoxically, widen health disparities in the short term. This is because advantaged individuals within any society are nearly always in the best position to take the earliest and greatest advantage of medical innovations that bestow predominantly individual (rather than group) benefits.

Most sociologists of the life course agree that health status is closely related to social status, regardless of the unique risks associated with a particular time period in the life course. Although the risks of particular health statuses and outcomes may change from period to period, an individual's social status is the most fundamental condition in any period. Some health policies, such as effective public health measures, have collective benefits that are quite independent of social status. Adequate sanitation, clean and safe drinking water and food supplies, and immunization programs benefit entire populations and all the groups within them. However, because it is social status that influences whether individuals can access the other kinds of resources they need to maintain health and prevent illness, individuals with more money and social resources have additional capacity to marshal whatever range of resources they need to prevent disease and maintain health, compared to less advantaged individuals.

The *life course health development* framework developed by Neal Halfon and Miles Hochstein (2002) suggests a set of research and health policy goals to improve

life course health trajectories and minimize health disparities for vulnerable groups. The authors proposed research that identifies critical and sensitive periods of early health risk and protective factors. By pursuing a developmental approach, they argued that health policy could shift from later interventions focused on ill health to earlier and more effective interventions that could prevent illness and optimize developmental health. Because of the complexity of health development over the life course, Halfon and Hochstein maintained that health disparities can be addressed only within a framework that recognizes the social nature of disparities and cannot be addressed by additional health care access or resources alone. They also argued that successful interventions will depend on reducing inequalities in income and employment benefits and family and social relationships. In this sense, their health policy prescriptions come full circle from the conventional, but restricted, definition of health policy that is most often considered to the more expansive WHO and U.S. Department of Health and Human Services definitions.

Link and Phelan (1995), pioneers of the fundamental cause framework, recommended that health policy initiatives identify strategies that could help individuals who are SES-disadvantaged to compensate by equalizing the coping strategies that now link SES advantages to improved health outcomes. New health advances targeted to individuals, even when targeted especially to disadvantaged individuals, will not necessarily improve health outcomes. In fact, individually targeted health policies may widen disparities, at least initially, because the wealthy are always positioned to take more advantage of innovation. Additional research on life course health trajectories may suggest ways to equalize coping strategies at critical junctures or sensitive turning points in life course trajectories that could inform health policy innovations. The Link and Phelan framework reinforces the importance of broadening the way policy makers think about health policy to address persistent health disparities currently experienced by vulnerable groups.

It seems obvious that health policies that are universal and that minimize dependence on individual resources hold the most promise to smooth health trajectories, address health risks, and minimize health disparities over the life course. Enacting and implementing universalist policies intended to operate at the group or population level—policies resembling public health interventions rather than the dominantly individual medical care preoccupation of current health policy debates—could potentially reduce disparities among the most vulnerable who are unlikely to have their health improved by contemporary health policies that target individuals.

**SEE ALSO** Volume 2: *Health Care Use, Adulthood; Health Differentials/Disparities, Adulthood; Health Insurance; Policy, Family;* Volume 3: *Long-term Care; Policy, Later Life Well-Being.*

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# POLITICAL BEHAVIOR AND ORIENTATIONS, ADULTHOOD

Citizen engagement, or the constellation of behaviors that people engage in order to change the political and social world around them, is a multidimensional phenomenon. Despite an early preoccupation with analyzing people's involvement in elections (e.g., political behavior), scholars have come to recognize that citizen engagement extends far beyond the ballot box and encompasses activities such as protesting, volunteering, and even using their power as consumers through engaging in boycotts (not buying certain products, goods, or services) and buycotts (buying only certain products, goods, or services) in order to reward or punish the company that produces them. However, in this entry the focus is on adult political participation, namely voting and a few other behaviors that are centered around elections. In addition to what people *do*, this entry will consider what people *think* about politics. Although studying people's thoughts about politics raises a variety of issues, attention here largely focuses on two indicators related to political orientations—party affiliation and political ideology. (e.g., where one locates oneself along the liberal/conservative continuum).

## STABILITY AND CHANGE IN POLITICAL BEHAVIOR AND ATTITUDES ACROSS THE LIFE COURSE

Researchers have long observed increases in political engagement with age (Verba Nie, 1972). For example, one study (Zukin, Keeter, Andolina, Jenkins, & Delli Carpini, 2006) found that political engagement increases with age, reaching a peak at or around age 65 and then falling sharply among individuals near and beyond age 70. The researchers used five indicators to measure political engagement: regularly voting in local and national elections; attempting to persuade others politically around the time of an election; displaying campaign buttons, signs, or sticker;, making a campaign contribution; and volunteering for a candidate or political organization. In the 2004 presidential election, voting turnout followed a similar pattern. Self-reported turnout was the lowest among those between the ages of 18 and 24 (47%) and highest among those older than 55 (73%; Faler, 2005). Turnout increased steadily with age in the intervening years.

It is important to also point out that although youth remain disproportionately absent from participation in electoral politics, the 2008 presidential primaries and caucuses witnessed sizable increases in the number of youth who turned out in predominantly Democratic contests. Inspired by the two historic firsts (Barack Obama as the first viable African American candidate and Hillary Clinton as the first viable female candidate for a major party nomination), and the use of the Internet as a tool for political organizing, young people increased their participation markedly from the 2000 nominating contests (Center for Information and Research on Civic Learning and Engagement, 2008).

Why would voting or volunteering for a campaign be related to age? First, in the words of Sidney Verba and Norman Nie (1972), there is "gradual learning," which refers to the acquisition of political knowledge over the course of one's life that makes navigating the political system easier. Similarly, Steven Rosenstone and John Mark Hansen (1993) suggested a life experience hypothesis, which holds that "people acquire resources that promote participation as they grow older" (p. 137). These resources include political knowledge (regarding parties, candidates, and public affairs more generally), political skills, and denser social networks that increase the likelihood of being asked to take part in public life.

Additionally, the acquisition of new roles and life experiences may account for increases in political participation in adulthood. Once an individual moves beyond young adulthood, responsibilities emerge that can pull him or her toward becoming an engaged citizen. The nomadic existence of youth is now a thing of the past, as adults begin to plant roots upon becoming spouses and parents. Doing so, in turn, helps to foster more political engagement as people come to recognize the importance of politics for concerns such as taxes, public safety, and the quality of schools. One's profession can also play a role in fostering more participation because the workplace is often a site for political discussions and mobilization among peers. Finally, the onset of retirement and widowhood often foreshadows one's declining health and cognitive capacity, which makes active engagement in the polity more difficult than in previous years.

Turning to political orientations, two indicators stand out for their predictable life course patterns: party affiliation and ideology. Party affiliation, or one's willingness to identify with one of the two major parties in the United States (Democrat and Republican), is shaped largely by the nature of the times during which one was

being socialized early in life. This means that despite changes in the political environment over the life course, an individual will likely cling to the party that was dominant during the impressionable years of one's youth (Alwin, Cohen, & Newcomb, 1991; Jennings & Markus, 1994; Sears & Funk, 1999). This is not to suggest that the transition to adulthood brings with it virtually no chance of changing one's party affiliation over the life cycle; what it does suggest is that, for example, differences in the party affiliation of those socialized in the 1960s (Baby Boomers) versus the 1980s (Generation Xers) are best explained by generational versus life course effects. (Generational effects refer to the sum of common experiences, opportunities, and situations that help shape an age cohort's behavior and attitudes across the life cycle.) Simply put, Boomers came of age when the Democrats were the dominant party in government, whereas Xers did so during a Republican resurgence led by former U.S. President Ronald Reagan (1911–2004). In short, although change is possible, partisanship tends to remain a stable part of one's identity over the life cycle.

An aspect of party affiliation that does follow a predictable pattern across the life cycle is the strength of partisanship. That is, in addition to asking about a person's party affiliation, pollsters also ask how strongly a person identifies with his or her chosen party. Strong partisanship tends to increase with age, with 41% of those age 55 and older in 2004 identifying themselves as "strong" partisans compared with only 23% of those under 30 (Eriksen & Tedin, 2007). Similar differences have been observed across the life course in previous years. Having had a lifetime to consider whether one is a Democrat or Republican, individuals tend to harden their commitment the closer they get to the end of the life course.

Strength of partisanship is not the only aspect of political orientation that is susceptible to life course effects. Political ideology, or the extent to which a person locates him or herself on a continuum ranging from conservative to liberal, changes in accordance with where he or she is in the life course. The trend in adulthood is to become more conservative with age, and this is true regardless of the time period in which data is collected. Moreover, as Robert Eriksen and Kent Tedin (2007) pointed out, "Each generation starts out with the same level of liberalism and drifts rightward about the same rate" (p. 156).

Underlying the life course effect in political ideology are a variety of factors thought to push one in a conservative direction. The first centers on personal finances. Age brings greater accumulation of wealth, which, in turn, makes conservative economic policies more favorable. Even if the political rhetoric of lower taxes translates into reality for only a small subset of voters, the idea of having more money in one's bank account on payday of course resonates positively with voters.

***Canvassing.*** *Anne Walpole talks to Frank Hill about the gay marriage amendment while canvassing in Richmond, VA.* AP IMAGES.

Additionally, age brings with it a propensity to cling to social norms that were a defining part of one's youth. As is so often the case, social norms are often challenged the most forcefully by young people. Unhappy with the status quo, youth often behave in ways that unsettle older adults who prefer to adhere to established norms of behavior. For example, surveys today reveal a marked age difference in attitudes toward gay rights. Young people are significantly more in favor of allowing gay marriage than are older adults. In one report, 53% of those between the ages of 18 and 29 were in favor of gay marriage, compared with 38% of those age 30 through 49, 30% of those 50 through 64, and only 16% of those 65 and older (Pew Research Center, 2006). Because opposition to the liberalization of marriage laws is most closely associated with conservatism, it is no surprise to see older citizens more closely identified with this end of the ideological continuum than younger adults.

## THE CONSEQUENCES OF LIFE COURSE PATTERNS IN POLITICAL BEHAVIOR AND ORIENTATIONS

The disproportionate political activism of older voters compared to younger voters can pose challenges to the crafting of equitable public policies. Naturally, policy makers tend to respond more to those who are politically engaged. At any point in time, policies are likely to be more reflective of the interests of those closer to the end of the life course than the beginning.

For example, the U.S. social welfare policy known as Social Security is facing long-term financial difficulties. Social Security provides retirement income for those age

62 and over. A recent attempt to reform the system by allowing some investment of Social Security contributions in the stock market was met with varying support across the life course. Young people generally favored the plan. A 2002 poll conducted by the *Washington Post*, the Kaiser Family Foundation, and Harvard University estimated support among youth (ages 18 to 24) at 61%. Support dropped off significantly among older adults, and only 24% of those age 65 and older supported such a plan (Zukin et al., 2006). Despite a concerted effort by the White House to rally public opinion behind President George W. Bush's (b. 1946) plan, it was soundly defeated in Congress. Legislators, instead, listened to those who reliably vote—and those who opposed the plan. To *not* have listened would have risked alienating the support of those whom a legislator needs on Election Day.

This example highlights a problem posed by disproportionate activism across the life course. Kay Schlozman, Sidney Verba, and Henry Brady (1999) referred to the "equal protection of interests" rationale for robust citizen engagement, by which they mean the willingness of citizens with conflicting interests to take part in public life. Clearly, different levels of political participation over the life course challenge the ideal of equal protection of interests on any issue in which interests vary by age.

## CHALLENGES TO THE MEASUREMENT OF LIFE COURSE EFFECTS ON POLITICAL BEHAVIOR AND ORIENTATIONS

Two issues arise when considering life course effects on political orientations and behavior. The first concerns the use of cross-sectional surveys to measure changes over the life course. Typically, researchers interview different groups of people at different points in time and, by comparing the responses of people born in the same years (a birth cohort) at these different interviews, assess the extent to which individuals alter their behavior or orientations as they age (this design is called a pooled cross-section). Because the same person is not being asked the same question at different times in his or her life, it is difficult to say for certain whether changes in a birth cohort's orientations and behavior are the result of individual maturation. It is likely that these studies reveal a little bit of both—that is, changes that arise over the life course but also stability in some individual behavior, an artifact of cross-sectional data that makes it difficult to measure precisely changes over the life course. A related complication is period effects. These occur when a political or social event, such as the attacks of 9/11, cause an abrupt but temporary change in the behavior of a cohort or cohorts. News interest and political attentiveness were markedly higher among all cohorts in the days after the attacks but returned to their pre-9/11 levels within a year after the event.

Estimating life course effects using cross-sectional data can thus be a limited enterprise. What is needed are more longitudinal data sets from which to gauge changes in adult behavior and orientations with age. This type of survey (a panel or longitudinal survey) tracks the same individuals over the life course and provides more telling insights into how age affects one's orientation to the political world. Unfortunately, longitudinal surveys are few and far between, largely because of cost and an unwillingness or inability of respondents to maintain their participation over many years.

The second issue to complicate the estimation of life course effects on adult political orientations and behavior is the need for more cross-national studies. To say with any certainty how age influences one's political identity requires analyses that extend beyond the United States. However, as Roberta Sigel (1989) pointed out, "We still do not have enough cross-national studies, especially those conducted in the non-Western world.... The importance of obtaining such information is so self-evident as not to require further elaboration here" (p. 469).

Many of the points raised in the preceding analyses are ripe for further elaboration. Scholars in fields such as political science and sociology have developed a rich tradition of inquiry in this area, but there is still much to understand.

**SEE ALSO** Volume 1: *Identity Development; Political Socialization;* Volume 2: *Social Movement; Volunteering, Adulthood.*

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***Krista Jenkins***

# POVERTY, ADULTHOOD

Poverty generally refers to individuals residing in households that lack the income to purchase a minimally adequate daily basic "basket" of goods and services. The actual measurement of poverty, however, varies widely across countries. In the United States poverty is officially measured in terms of whether various-sized households fall below specific annual income levels. Considerable debate exists regarding the adequacy of this measure (Blank, 2008; Iceland, 2005). In Europe, poverty is frequently defined as residing in a household that falls below one-half of the national median income. In developing countries the standard often used is living in a family earning less than a dollar per day. The concept behind all of these approaches is that there is a basic minimum amount of income necessary in order for individuals to adequately carry out their day-to-day activities. Households that fail to acquire such income are considered poor. Other measures of poverty (such as those developed by the United Nations) have begun to incorporate aspects of social deprivation into their measurement of poverty, such as shortened life expectancy, illiteracy, and long-term unemployment (United Nations Development Programme, 2007). This entry examines poverty within the context of the life course, and explores the likelihood, consequences, and solutions to poverty from a life course perspective.

## THE RISK OF POVERTY ACROSS ADULTHOOD

The social scientific study of poverty across the life course began with Rowntree's (1901) study of 11,560 working-class families in the English city of York. Rowntree estimated the likelihood of falling into poverty at various stages of the life course. His work was seminal in developing the concept of the life cycle, and it demonstrated that working-class families were more likely to experience poverty at certain economically vulnerable stages during their adulthood (e.g., starting a family and during retirement). Since Rowntree's initial work, much has been learned regarding the patterns and dynamics of poverty across adulthood.

Cross-sectional surveys (such as those conducted annually by the U.S. Bureau of the Census) have shown that within the United States, children and young adults are at the greatest risk of experiencing poverty. The risk declines during the prime earning years of the 40s to mid-50s, and then slowly increases as adults reach their retirement years (DeNavas-Walt, Proctor, & Smith, 2007). In addition, cross-sectional analyses indicate that certain characteristics can place individuals at a greater risk of experiencing poverty. These include having low education and few job skills, living in single-parent families, being non-White, residing in economically depressed inner cities or rural areas, and having a disability (DeNavas-Walt et al., 2007). All of these characteristics tend to put individuals at a disadvantage when competing in the labor market.

Comparative analysis using the Luxembourg Income Study (a data source containing income and demographic information on households in approximately 30 industrialized nations) has shown that U.S. poverty rates are among the highest in the developed world. This is true whether one looks at poverty among children, working-age adults, or elderly persons (Smeeding, 2005). Two reasons stand out as to why Americans at the lower end of the income distribution do so badly compared to their counterparts in other countries. First, the social safety net in the United States is considerably weaker than in other industrialized countries, resulting in more households falling into poverty (Alesina & Glaeser, 2004). Second, the United States has been plagued since the early 1980s by relatively low wages at the bottom of the income distribution scale compared to other developed countries (Blank, Danziger, & Schoeni, 2006; Fligstein & Shin, 2004). These factors contribute to both the relative and

absolute depths of U.S. poverty in comparison with other industrialized nations.

Beginning in the 1970s, researchers in the United States have increasingly sought to uncover the dynamics of poverty over time. The emphasis has been on understanding the extent of turnover in the poverty population from year to year and determining the length of poverty spells. These studies have relied on several nationally representative panel data sets, including the Panel Study of Income Dynamics, the National Longitudinal Survey of Youth, and the Survey of Income and Program Participation. This work has shown that most spells of poverty are fairly short term (1 to 3 years in length), but that households that experience poverty will often encounter poverty again at some later point in the life course (Duncan, 1984; Stevens, 1994, 1999). In addition, this work has demonstrated that particular events, such as job loss, family breakup, or ill health, are important factors leading households into poverty. This body of work has also shown that a relatively small number of households will experience chronic poverty for years at a time. Such households typically have characteristics that put them at a severe disadvantage vis-à-vis the labor market (e.g., individuals with serious work disabilities, single-headed families with a large number of children, racial minorities living in economically depressed inner-city areas).

An alternative approach for understanding the scope of poverty has been to analyze impoverishment as a life course event. For example, what are the chances that at some point during their adulthood an American will experience poverty? The work of Rank and Hirschl (1999, 2001b) has addressed this question. Their results indicate that between the ages of 20 and 75, nearly 60% of Americans will have spent at least 1 year below the official poverty line, while three-quarters of Americans will encounter poverty or near poverty (below 150% of the poverty line). Consistent with the earlier mentioned studies of poverty dynamics, individuals experiencing poverty throughout the life course often do so for only 1 or 2 consecutive years. Once an individual experiences poverty, however, it is quite likely that the person will encounter poverty again at some later point in his or her life course. This work has indicated that falling into poverty is a common life course event for the majority of Americans.

Rank and Hirschl have also found that the periods of early and later adulthood are characterized by a heightened risk of poverty (as indicated in cross-sectional studies). For example, between the ages of 20 and 40, 36% of Americans experienced poverty; between the ages of 40 and 60, 23%; and between the ages of 60 and 80, 29% (Rank & Hirschl, 2001a). This body of work has also

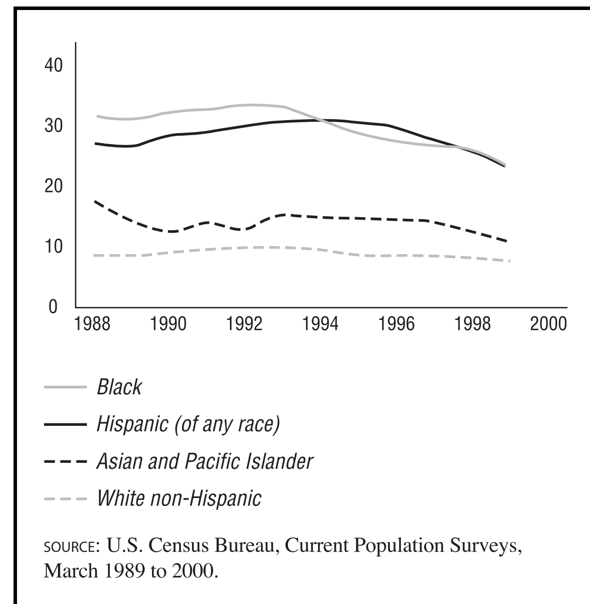


***Figure 1.*** *Poverty rates for individuals by race and Hispanic origin, 1988–1999.* CENGAGE LEARNING, GALE.

shown that the odds of using a social safety net program during adulthood are exceedingly high (Rank & Hirschl, 2002, 2005). Consequently, 65% of all Americans between the ages of 20 and 65 will at some point reside in a household that receives an income-based welfare program (such as food stamps or Medicaid).

## THE LIFE COURSE IMPACT OF POVERTY

A second major area of life course research on poverty has been to analyze the impact of poverty on various life outcomes. Two specific areas have received a considerable amount of research attention—intergenerational poverty transmission and the long-term health effects of living in poverty.

Analyses of the American system of stratification show that while some amount of social mobility does occur, social class as a whole tends to reproduce itself (Beeghley, 2008; Fischer et al., 1996). Those with working-class or lower-class parents are likely to remain working or lower class themselves. Similarly, those whose parents are affluent are likely to remain affluent. The reason for this is that parents' economic differences result in significant differences in the resources and opportunities available to their children. These differences, in turn, affect children's future life chances and outcomes (such as the accumulation of skills and education), which in turn affect their economic status (DiPrete & Eirich, 2006; Rank, 2004).

Consequently, growing up in poverty can have a significant impact upon one's later economic well-being (Bowles, Gintis, & Osborne Groves, 2005; Duncan & Brooks-Gunn, 1997). For example, Rodgers (1995) found that of those who experienced poverty as an adult, 50% had experienced poverty as a child, while an additional 38% had grown up in homes that were defined as "near poor" (below 200% of the U.S. poverty line). Research has also shown strong associations between parents' and children's income, wealth, occupational status, and neighborhood status (Beller & Hout, 2006; Shapiro, 2004; Sharkey, 2008). This research illustrates that prior economic advantages or disadvantages can have a profound effect on future life outcomes.

Researchers have also examined the impact that poverty exerts on future health outcomes. One of the most consistent findings in epidemiology is that the quality of an individual's health across the life course is negatively affected by lower socioeconomic status, particularly impoverishment (Mullahy, Robert, & Wolfe, 2004). Poverty is associated with a host of health risks for one's self and one's children, including elevated rates of heart disease, diabetes, hypertension, cancer, infant mortality, mental illness, undernutrition, lead poisoning, asthma, and dental problems. The result is a death rate for the poverty-stricken between the ages of 25 and 64 that is approximately three times higher than that for the affluent within the same age range (Pappas, Queen, Hadden, & Fisher, 1993), and a life expectancy that is considerably shorter (Geronimus, Bound, Waidmann, Colen, & Steffick, 2001). For example, Americans in the top 5% of the income distribution can expect to live approximately 9 years longer than those in the bottom 10% (Jencks, 2002).

## LIFE COURSE POLICY APPROACHES FOR ALLEVIATING POVERTY

Although there are a variety of key policy approaches toward poverty alleviation (e.g., macroeconomic policies to stimulate job creation, tax policies such as the Earned Income Tax Credit), a life course approach emphasizes the importance of timing and development across the life span. With this in mind, three such strategies appear critical. First, policies that invest in the well-being and growth of individuals, particularly children, are vitally important. These include increasing access to quality child care, health care, and education. Each of these areas is essential in allowing individuals to fully develop their human and economic potential and thereby reducing their risk of poverty in the future. In addition, such policies have been shown to be quite cost effective in that an investment of resources early in life can produce sizable economic and societal benefits as individuals age across the life course (Holzer, Schanzenbach, Duncan, & Ludwig, 2007).

A second life course approach to poverty alleviation focuses on asset-building strategies for lower income households and communities (Rank, 2007). Individual asset accumulation provides an effective strategy for coping with economic pitfalls that occur across the life course. A savings account or other source of liquid wealth can allow families to tap into financial reserves during times of economic hardship. Economists refer to this as the ability of assets to protect consumption against unexpected shocks. In addition, wealth and assets can allow individuals to accomplish more of their long-term economic and social goals. For example, financial assets can be instrumental in furthering an education, purchasing a home, or planning for retirement (Schreiner & Sherraden, 2007). Examples of asset-building policies benefiting lower income households include Individual Development Accounts in the United States, Child Trust Funds in the United Kingdom, and the Central Provident Fund in Singapore.

Just as the acquisition and development of assets are important for individuals, they are equally important for the communities in which individuals reside. Poor neighborhoods are often characterized by a lack of strong community assets, such as quality schools, decent housing, adequate infrastructure, economic opportunities, and available jobs. These, in turn, affect the life chances of residents living in such communities. Strengthening the major institutions found within lower income communities is vital because such institutions have the power to improve the quality of life, foster the accumulation of human capital, and increase the overall life course opportunities for community residents (Grogan & Proscio, 2000).

A third life course approach toward poverty alleviation is the strengthening of the social safety net. As noted earlier, a majority of individuals will encounter poverty at some point during their lifetime. Having a strong and effective safety net in place is critical in providing support so that individuals and families are able to get through such difficult economic times. Programs that provide economic relief during times of unemployment, ill health, and family disruption are fundamental to the life course well-being of individuals and families (Esping-Andersen, 2002).

All of these policy approaches recognize the importance of understanding poverty within the context of the life course. Poverty is a life course event that will affect the majority of the population. Effective poverty alleviation policies are those that recognize and confront the life course patterns, dynamics, and effects of poverty for individuals and households.

**SEE ALSO** Volume 1: *Poverty, Childhood;* Volume 2: *Family and Household Structure, Adulthood; Health Differentials/Disparities, Adulthood; Income Inequality; Social Class; Social Mobility; Unemployment;* Volume 3: *Poverty, Later Life; Wealth.*

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***Mark R. Rank***

# R

## RACISM/RACE DISCRIMINATION

Racism is an organized system that categorizes, ranks, and differentially allocates societal resources to human population groups (Williams & Rucker, 2000). According to James Jones (1997), racism builds on the negative attitudes arising from prejudice and rests on three broad assumptions: (a) that group characteristics are based on presumed biology; (b) the superiority of one group over others; and (c) the rationalization of institutional and cultural practices that formalize hierarchical domination of one racial group over another.

Racism is thus a complex construct. It is not synonymous with related terms such as prejudice, discrimination, bigotry, or bias that do not necessarily incorporate hierarchical domination in the form of social stratification or power. For example, *prejudice* is "a positive or negative attitude, judgment, or feeling about a person that is generalized from attitudes or beliefs held about the group to which the person belongs" (Jones 1997, p. 10). *Discrimination* involves behavior aimed at denying members of particular groups equal access to societal rewards and, as such, goes beyond merely thinking unfavorably about particular groups.

Racism should not be confused with other forms of oppression such as sexism, heterosexism, or homophobia. Whereas these forms of oppression share a similar root in that one group is viewed as superior to another, racism is distinct because it is founded on cultural conceptions of race. There are important implications of racism for the life course, including negative psychological effects, socioeconomic disadvantage, and racial health disparities.

### RACISM AND THE CONCEPT OF RACE

Understanding racism requires an examination of the concept of race and its function in U.S. history and culture. While many have sought a genetic foundation for categorizing population groups, there is no scientific consensus that racialized groups are genetically distinct. Population groups are transformed into races for political purposes on the basis of arbitrary but distinctive phenotypic (i.e., physical appearance) and cultural criteria. The belief that groups of people identified on the basis of these criteria are *also* inherently different and genetically distinct is the unfortunate remnant of an outdated pseudo-scientific idea (Smedley & Smedley, 2005). The ideology of racism is built upon this pseudo-scientific racialization of targeted population groups.

Racism in the United States began during the colonial period, although the exact nature of the historical development of racism has been heavily debated. From one perspective, the ideology of racism is said to be a deliberate invention of early colonists to justify the enslavement of Blacks for economic purposes (Handlin & Handlin, 1947). Others argue that racism developed from preconceived prejudices against African Americans, rooted in early 19th century European biological determinism that classified humans into four hierarchical, mutually exclusive groups—mongoloid, caucasoid, negroid, and australoid—with Blacks at the bottom of the ranking. This categorization was not neutral but characterized physical differences as innate and immutable characteristics. These notions were used to justify slavery and the pseudoscience underlying this classification evolved simultaneously with the development of slavery and legal segregation (Jordan,

***Hurricane Katrina.*** *Tangeyon Wall stands by a broken window in her home, which was flooded by Hurricane Katrina in New Orleans. Wall is angry that utility services are returning to her neighborhood of predominantly Black residents much slower than they are to other areas of the city.* AP IMAGES.

1974). Regardless of chronology, racism grew as a system of beliefs and practices that propagated ideas about the inferiority of persons not classified as *White*. While any ethnic group can be the target of racism, in the United States racism is particularly relevant to non-White ethnic minority groups. The lasting effects of the country's racist policies are observable in persistent racial inequities in criminal justice, education, employment, health, health care, housing, income, and other areas. While the emphasis in this entry is the United States, racism occurs in every country throughout the world.

## LEVELS OF RACISM

Racism is a process that operates on multiple levels of experience, from the psychological to the social. Racism can be *internalized* when persons accept the ideology of their racial inferiority; *personally-mediated* as when persons are dehumanized or treated differentially by others because of their race; or *institutionalized* due to restricted access to material resources and opportunities for empowerment throughout society (Jones, 2000). The various levels at which racism is experienced affect personal stress and life chances, which in turn affect the well-being of individuals, families, and communities.

*Institutional racism* is a systematic set of procedures, practices, and policies that penalize, disadvantage, and exploit individuals on the basis of race. In addition, institutional racism is the extension of individual beliefs by using and manipulating institutions to restrict the choices, rights, mobility, and access of certain individuals. Such effects are distributed throughout society through institutional structures, ideological beliefs, and the everyday actions of people (Jones, 1997). Three examples of institutional racism in the United States are chattel slavery, the *Plessy v. Ferguson* decision of the U.S. Supreme Court, which legalized racially separate facilities, and racial residential segregation. These actions were not only associated with an ideology of racism, but they led to policies and practices that unequally distributed resources and opportunities so that people experienced unequal physical environments, educational systems, and economic opportunities.

*Structural racism* refers to how social structures, historical legacies, individuals, organizations, and institutions interact to disadvantage some racial groups and advantage others. Structural analysis and critical race theory suggest that racism is not an aberrant belief or behavior, but is consistent with U.S. cultural values that tangibly advantage some population groups (Ladson-Billings & Tate, 1995). A structural analysis of racism highlights the important interplay between educational, criminal justice, housing, health, and economic institutions. It is this interinstitutional interaction that distinguishes structural racism from other forms of racism or discrimination.

## MEASURING RACISM AND RACIAL DISCRIMINATION

The main challenge of conducting research on racism and racial discrimination lies in the area of measurement. Currently there is little consistency or agreement on how racism or racial discrimination should be measured, much less is there available data on the psychometric properties of current measures. One construct used in research on racism and racial discrimination is perceived discrimination. The construct is based on the process of perception and emphasizes the attributions made by those trying to understand the underlying cause of interpersonal interactions. Perceived discrimination deemphasizes the intention and ideology of the actor and places the subjective interpretation of the observer at the center. In this respect, perceived discrimination is conceptually related to Ellis Cose's (1993) list of race-based daily hassles that take up time and mental energy. Much of this research is based on descriptive survey self-reports. Less empirical information is available on the cognitive processes by which people understand and decide whether or not a particular act is indeed discriminatory. This is an area in need of additional research.

Another approach is to measure experiences of discriminatory behavior. Rebecca Blank and colleagues (2004) provide four types of individual and organizational discriminatory behaviors that can guide measurement and analysis. *Intentional discrimination* is consistent with traditional

notions of discrimination whereby people deliberately treat persons of different racial or ethnic groups differently. *Subtle or automatic discrimination* occurs when people unconsciously categorize people based on their race or ethnicity. Similarly, *statistical discrimination* (or profiling) occurs when an individual uses overall beliefs or generalizations about a group to make decisions about an individual in that group. Finally, in addition to the types of discrimination that can be perpetrated by individuals, organizations can reflect the same biases as people who operate within them. This type of discriminatory behavior can be referred to as *organizational discrimination*.

Racism and discrimination have led to residential segregation, exclusionary housing patterns, differential hiring and promotion practices, and other such organizational and institutional practices. Practices and laws that appear to be neutral may, in fact, lead to differential outcomes, regardless of intended impact, and therefore may be considered discriminatory. This also means that the definition of *racism* is unlikely to be universally agreed upon, because different groups will disagree on the inferences made about the causes of observed racial inequalities in income, employment, education, and health. The idea that the consequences of racism need not be intentional suggests that racism is the product of the perception of different observers. Often, terms describing such an idea are used as reactions to institutional and structural conceptualizations of racism that do not require intentionality but illustrate disparate outcomes.

## EFFECTS OF RACISM AND DISCRIMINATION OVER THE LIFE COURSE

Numerous personal accounts as well as social scientific research demonstrate the pervasive negative effects of racism on outcomes spanning the entire life course (Collins, David, Handler, Wall, & Andes, 2004). Moreover, while most studies examine racism as though it occurs at a specific point in time, researchers are beginning to argue that racism is a dynamic process (Blank et al., 2004). The consequences of racism range from negative psychological effects, to socioeconomic disadvantages, to health disparities. For example, exposure to racism and racial discrimination has been associated with elevated blood pressure and unhealthy coping behaviors such as smoking or overeating (Krieger & Sidney, 1996), and socioeconomic disadvantage and poor health outcomes during gestation and childhood have been shown to predict chronic diseases in later life (Barker, 1998).

Racism also exerts its toll through suppressed anger and rage and the cognitive burden of dealing with racism on a frequent basis (Feagin & McKinney, 2003). The chronic wear and tear of racism-related stress can alter the body's ability to adapt in a healthy manner over time, thus producing adverse mental, behavioral, and physical health consequences (McEwen, 1998). The impact of racism over the life course is not always linear or continuous. There might be some critical periods, such as early childhood or in old age, where the harmful effects of racism are most intense, or disadvantage at different life stages can have a cumulative dose-response effect (Graham, 2002). Moreover, human agency can moderate the effect of racism exposures at any point during the life course.

## SELECTED ISSUES OF DEBATE AND CONTROVERSY

Many provocative issues and questions are the subject of current debates regarding racism. Although there remains disagreement about what race and racism are, what is clear is that these constructs have not been treated with the same care and precision as other key social and scientific variables (LaVeist, 1996). It is common to read studies that carefully define and operationalize each variable in the analysis except race and that conflate racism with discrimination, prejudice, bias, and other related terms.

Many definitions of racism imply that a person or an act is either racist or it is not, but do not distinguish between racism and related terms such as *discrimination* and *prejudice*. Some scholars argue that this duality is a simplistic way to think of racism, which has sparked a variety of new conceptualizations of racism, including *color-blind racism*, *silent racism*, and *liberal racism* (Bonilla-Silva, 2003; Sleeper, 1997; Trepagnier, 2006). Each of these terms suggests that the oppositional categories of *racist* or *not racist* are outdated and should be replaced with a continuum that portrays 21st century racial reality in the United States. However, defining racism as a continuum suggests that just about any statement or behavior can be designated as racist. In addition, reducing racism to a question of individual-level behavior, beliefs, and attitudes clouds the distinction between racism, bias, prejudice, and discrimination.

Prejudice, bias, and discrimination are commonly used to describe the attitudes and behaviors of individuals that are hypothesized to lead to negative interpersonal interactions. Such behaviors are also used to infer the presence of systemic organizational and interrelated social, economic, and political contexts that affect differentially people by race in the absence of identifying individuals who may be biased, ethnocentric, or prejudiced. Hypothesizing racism as the fundamental cause of persistent racial differences in outcomes also can be useful for explaining the differential impact of policies and practices. Inferring the existence of racism neither requires nor precludes individuals who are biased or prejudiced against people of other races.

Sloppiness in use and measurement of the concept of racism raises concerns about how the term can potentially lead to erroneous or misleading conclusions and problems. For example, terminology such as "playing the race card" refers to efforts to infuse social stratification, institutional racism, and structural racism into the discussion of disparate outcomes. The notion that racism is nothing more than an excuse to rationalize personal incompetence or that ethnic minorities cause their own problems is often a result of efforts to discount how cultural and historical institutions advantage some and disadvantage others. Racism is not a proxy for discrimination and prejudice, but a framework for understanding how social stratification advantages some and disadvantages others. The subjective nature of the process employed to identify racism guarantees continuous debate and disagreement about what acts constitute racism and subsequently who is or is not racist. This view accentuates racism as a *process* of understanding how someone is accused of being racist as well as whether that person (or persons) accepts this conceptualization of their behaviors or statements.

The fact that a broad array of behaviors and statements can be, and often are, viewed as racist contributes to a certain degree of cynicism when objectionable discriminatory behavior and bigoted remarks are protested. Some go as far as to argue that racism is no longer a significant problem for people of color (D'Souza, 1995). Like so many contentious political disagreements, what is or is not racist is difficult to prove, except in the legal realm, because labeling something as racist often presumes or requires intention. The objectionable nature of statements, behaviors, or differences in outcomes will continue to be interpreted by many within a framework that views racism as the underlying cause. Certainly not all objectionable statements are worthy of being designated as racist, but it is important for people to understand the complexity of racism that transcends basic notions of prejudice, bias, or discrimination. Racism is an *ideology* that ranks population groups according to a hierarchy of inferiority and superiority and leads to devastating effects on people of color.

Research on racism has had important policy and practice implications. Racism has provided an important perspective for understanding persistent racial differences in such important outcomes as socioeconomic standing, housing patterns, and health. Examining the health of African Americans through the lens of racism highlights how housing policy can lead to racial residential segregation and the unequal distribution of educational and financial resources that affect opportunities for leading long and healthy lives.

**SEE ALSO** Volume 2*: Gender in the Work Place; Policy, Employment; Stress in Adulthood;* Volume 3*: Ageism/ Age Discrimination.*

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# REFUGEES

SEE Volume 1: *Immigration, Childhood and Adolescence;* Volume 2: *Immigration, Adulthood.*

# RELATIVE COHORT SIZE HYPOTHESIS

The relative cohort size hypothesis aims to explain changes in birth rates, family formation, and well-being observed in the United States since the mid-20th century. It does so by positing that the economic and social fortunes of birth cohorts stem from their size relative to the size of their parental cohorts. It is also known as the Easterlin hypothesis, named after the economist Richard Easterlin who developed it, and the relative income or relative economic status hypothesis, named after the central concept linking relative cohort size to social and economic outcomes.

Easterlin (1961) first developed the relative cohort size hypothesis to account for fertility rates during the baby-boom years of the mid-20th century and the baby-bust years that followed (Easterlin, 1973). He later applied the argument to trends in marriage, divorce, education, female labor force participation, suicide, homicide, and alienation (Easterlin, 1978, 1987). The originality, insight, and broad scope of the hypothesis have generated a large collection of empirical studies.

## THEORY

Relative cohort size has two components: the size of a birth cohort and the size of the parental cohort that produced it. First, like cohort or generational influences more generally, the size of a birth cohort has important implications for the life experiences of its members. The number of persons born during the same year or historical period affects all stages of the life course, including high school graduation, employment, starting salaries, job promotions, salary increases, marriage, childbearing, divorce, retirement, and death. The key mechanism behind these influences of cohort size is income or earnings potential. Members of smaller cohorts face less crowding in the family and receive more attention from parents, less crowding in schools and more opportunities for educational attainment, and less crowding in the labor market and better job and earnings prospects. Larger cohorts face greater crowding and worse economic prospects.

Second, the size of the parental cohort—those born 20 to 40 years earlier—influences the expected standard of living or material aspirations of a birth cohort. Smaller parental cohorts provide a better standard of living for children, who become accustomed to that standard and develop high aspirations for their own standard of living as adults. Large parental cohorts, in contrast, create a lower expected standard of living among children.

These two components, the income potential or resources of a cohort and their expected standard of living or aspirations, define relative income. Demographic behavior, economic decision making, and social well-being follow directly from this comparison of resources to aspirations. Relative income in turn follows directly from the size of a younger cohort relative to an older cohort. In response to low relative income, members of a large cohort respond to the prospect of a deterioration of their living level relative to that of their parents by making a number of adaptations. They tend to marry late, postpone childbearing, rely on wages of working wives, and experience marital problems. Members of smaller cohorts with higher relative income require fewer such adaptations, more often following traditional norms for early marriage, two or more children, and homemaking roles for women.

The theory nicely fits the fertility swings of the post–World War II baby boom and bust. Cohorts entering young adulthood in the 1950s had been raised by a large parental generation during the poor economic times of the 1930s. Their small size, due to dropping fertility in the 1930s, created economic opportunities during the postwar prosperity. The combination of low aspirations and skyrocketing income led to early marriage, an unexpected burst of childbearing, and adoption of traditional family roles. By the 1970s the course of both relative cohort size and fertility reversed, however. The large baby boom cohorts born after World War II reached childbearing age when the high aspirations generated by the prosperity of their childhood conflicted with an overcrowded labor market and low income prospects. Couples closed the gap between their income and aspirations by avoiding the financial pressures associated with family responsibilities. They delayed marriage, had fewer children, and increased the hours worked by wives.

The logic of the theory also fits other social behaviors. According to Easterlin (1987), the sacrifice of family life and the effort to maintain economic status induce stress among members of large cohorts. This psychological and

economic stress may lead to high rates of out-of-wedlock births, suicide, crime, and, homicide—behaviors particularly common among baby-boom cohorts. In contrast, cohorts with smaller relative size and less stress, such as those born during the baby-bust years, experience fewer of these social problems.

Following the implications of his argument, Easterlin (1978) boldly predicted continued changes or reversals in fertility and other social behavior in decades to come. Although many theories predicted the continuation of past trends, the relative cohort size hypothesis posited counter-cyclical change. A small cohort with high relative income has many children, who belong to a large cohort. The large cohort, raised under good economic conditions and developing high expectations, faces crowding in families, school, and work. They then adjust their family behavior to have fewer children. The next smaller generation is positioned for higher relative income and fertility, and so on. Cycles of two decades of good times thus alternate with two decades of bad times. During the 1970s, a period of social and economic malaise, Easterlin predicted a turnaround in the 1980s and 1990s as smaller cohorts entered adulthood.

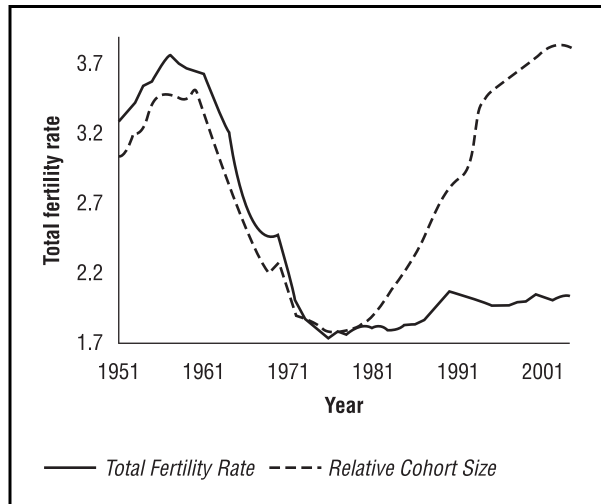


***Figure 1.*** *Trends in the total fertility rate and relative cohort size, 1951–2004.* CENGAGE LEARNING, GALE.

## EVIDENCE

The initial application of the theory to the baby boom and baby bust gave striking evidence of support. Easterlin proposed testing his hypothesis with two measures: the income of younger persons relative to older persons and the number of younger persons relative to the number of older persons. Graphing the total fertility rate by the latter measure—more precisely, the number of persons ages 30 to 64 as a ratio to persons ages 15 to 29—shows a remarkable match from 1951 to 1980 (see Figure 1). The theory does better than others in accounting for the puzzling and unexpected rise in fertility during the 1950s and the sudden and steep drop in the 1960s and 1970s.

However, the vast empirical literature stimulated in more recent decades by this provocative and testable hypothesis has been less clearly supportive. Perhaps most conspicuously, fertility failed to rebound to higher levels in the 1980s and 1990s as relative cohort size increased (see Figure 1). Otherwise, studies have shown much support but also a fair amount of disconfirmation. Interpretations of the diverse evidence have taken three forms.

First, some discount the validity of the theory. In a meta-analysis of 19 studies, Waldorf and Byun (2005) found that only 49 percent of 334 estimated effects of age structure on fertility support the relative cohort size hypothesis. They concluded that "several factors undermine the empirical support of the age structure/fertility link as hypothesized by Easterlin" (p. 36). Others favor competing theories of fertility change. For example, Lesthaeghe and Meekers (1986) and others saw a shift in norms and values as responsible for the drop and continued low levels of fertility in the United States and Europe. The feminist movement, youth protest, and concern with self-realization during the 1960s and 1970s represented the start of a long-term cultural trend toward individualism and post-materialism that fostered lower fertility and changing family forms. Instead of a component of counter-cyclical fluctuations caused by relative cohort size, such changes may be seen as part of a permanent second demographic transition (van de Kaa, 1987).

Second, defenders of the hypothesis argue that relative cohort size has effects that are clear and consistent, although other factors prove important as well. Macunovich (1998) found that 15 of 22 micro-level fertility studies and 15 of 22 macro-level fertility studies provided significant support for the Easterlin hypothesis. In addition, Macunovich (2002) presented wide-ranging evidence of the influence of relative cohort size on jobs, wages, relative income, female employment, college enrollment, marriage, divorce, fertility, economic demand, goods, and inflation.

Third, an integrative view argues that the influence of relative cohort size proves strong under certain conditions but not others. Easterlin (1987) hinted at this viewpoint by stating, "One would expect cohort size effects to dominate a cohort's experience only when other factors are relatively constant" (p. 3). Waldorf and Byun (2005) and Macunovich (1998, 2002) also recognized the contingent nature of the relative cohort size effects, but Pampel and Peters (1995) and Pampel (2001) presented the most extensive version of the argument. They argued that conditions during the American baby boom and bust such as low immigration, a sexual division of labor in work and family roles, and limited welfare programs intensified the importance of relative cohort size. Since then, rising immigration and movement

toward gender equality has weakened the importance of relative cohort size. In a similar way, strong welfare states have limited the importance of relative cohort size for fertility and other outcomes in European nations.

After decades of intense activity, research on relative cohort size has declined to a trickle (the work of Macunovich, 2002, and Waldorf and Byun, 2005, being notable exceptions). The trend no doubt results from the more limited success of relative cohort size in explaining contemporary behavior in contrast to behavior from the 1950s to the 1970s. Yet the potential value of studying the influence of cohort numbers remains. Researchers need to improve on previous work by controlling for factors that attenuate the influence of relative cohort size, improving measures of relative income, and recognizing the contingent nature of relative cohort size effects. With such improvements, the relative cohort size hypothesis may still offer insights into demographic and social behavior.

**SEE ALSO** Volume 2: *Baby Boom Cohort;* Volume 3: *Age, Period, Cohort Effects; Cohort.*

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***Fred C. Pampel***

# RELIGION AND SPIRITUALITY, ADULTHOOD

Religion is an important part of adult identity. Almost two-thirds of American adults believe in God without having doubts, and 61% claim membership in a religious organization (Sherkat & Ellison, 1999). In fact, some scholars assert that belief, along with relationships and work, is one of the three pillars of developing an identity as one becomes an adult (Arnett, 2004). Although it is a central component of identity, religiosity is not stable over the course of adulthood. Instead, ebbs and flows in religiosity coincide with major life course transitions. Moreover, historical trends suggest changes in religiosity at the societal level, and there are ongoing scholarly debates about the nature and extent of those changes.

## DEFINITIONS AND MEASUREMENT

*Religion* is an ambiguous term that has been used to describe both personal beliefs and formal organizations. The coming of age of the baby boom generation forced a better articulation of what is meant by religion in the scholarly literature. In their rejection of many formal institutions, baby boomers challenged institutionalized religion. They were among the first to draw a distinction between being religious and being spiritual (Roof, 1999). Being religious meant being associated with formal religious institutions and adhering to doctrinal decrees, whereas being spiritual meant interacting with higher or nonphysical powers that helped in one's search for meaning in life. Spirituality, then, can exist via formal religious institutions but also can exist outside them (Zinnbauer, Pargament, Cole, Rye, Butter, Belavich, et al., 1997). Many baby boomers claimed that they were spiritual, but not religious (Roof, 1999).

This distinction between religiosity and spirituality continues to exist, but because spirituality is more difficult to measure than religiosity, it is less often the focus of study. Religiosity is measured in various ways, including denominational affiliation, service attendance, belief in a deity, and conviction or strength of beliefs. Those measures are relatively common in surveys such as the General Social Survey (GSS), one of the primary sources for tracking aggregate changes in religiosity over time (Sherkat & Ellison, 1991, Firebaugh & Harley, 1991, Chaves, 1991, Hout & Fischer, 2002).

Because of its highly personal nature, spirituality is more difficult to define with simple survey questions. The relatively smaller set of studies that consider spirituality tend to use small sample surveys with open-ended questions (Zinnbauer et al., 1997) or ethnographic methods (Sargeant, 2000) to understand how individuals view the place

of spirituality in their lives. Large surveys that take individual spiritual activity into account such as the GSS often use measures such as prayer and meditation, which originate from organized religions. Those measures may overlook new or unique ways of practicing spirituality. A number of religious institutions are incorporating new practices meant to enhance the individual's interaction with a higher power, adding to the difficulty in separating the two concepts. In an age when the boundaries between spirituality and religiosity are being highlighted by some and blurred by others, continued research on individuals' and researchers' definitions of these concepts is important (Roof, 1999).

## TRENDS IN RELIGIOSITY OVER TIME

Two main trends in religion dominated the scholarly landscape at the start of the 21st century: the redistribution of individuals among denominations, or switching, and the process of secularization, that is, the process by which U.S. society was becoming less religious and thus more secular. In general the denominational affiliation of a person's parents is highly predictive of that person's affiliation in adulthood. However, a substantial minority of Americans—about one-third—switch affiliations during their lifetimes. Membership in conservative Protestant, Jehovah's Witness, Mormon, and nonreligious categories is growing, whereas mainline Protestant denominations are declining in membership. The denominations that are gaining members are also the ones most likely to retain members, and so their ranks are likely to remain stable or continue to grow (Sherkat & Ellison, 1999). The percentage of Americans who reported no religious preference doubled from 7% to 14% from 1991 to 1998 at the same time that those claiming a conservative Protestant affiliation grew (Hout & Fischer, 2002). This may represent an increasing polarization of belief in the United States, with more people subscribing to no formalized beliefs or strict fundamentalist beliefs.

Whether the United States is secularizing and why are perhaps the most debated questions in the contemporary scholarly study of religion. Whereas some point to the stability of attendance rates at religious services as evidence against secularization, others argue that a process of secularization is taking place nonetheless. This belief stems mostly from changes in common correlates of religious participation, as was shown by Robert Wuthnow in his 2007 book *After the Baby Boom: How Twenty and Thirty Somethings Are Shaping the Future of American Religion*. First, getting married and having children traditionally have been the primary triggers for initiating or reinitiating religious involvement. However, in more recent cohorts of young adults marriage is delayed substantially, and people are starting families later and having fewer children. Moreover, whereas religious involvement increases with education, women who earn graduate degrees are less likely to attend services than are those who have only a bachelor's degree. As more women earn advanced degrees, religious involvement among women probably will drop. Thus, although overall service attendance rates have remained stable, rates for young adults have declined and may continue to decline. In fact, the greatest declines have been among those who are not married and those without children, two groups that are increasing in size as a result of the trends in family formation mentioned above.

Although attendance may be declining for recent generations, Wuthnow's (2007) assessment indicates that religious beliefs seem to have remained robust since the 1970s. However, Wuthnow argues that although religious beliefs still are held by many young adults, the content of those beliefs has taken a different form. Instead of doctrinal beliefs, young adults are "tinkering" with a variety of faith traditions, experiences, and resources to build their belief systems. Moreover, belief systems are developed around individual needs as people seek meaning in their lives. Thus, overall attendance rates have not changed in recent decades, but contemporary young adults are less involved in formal religion than were their counterparts in the 1970s; their faith-seeking quests highlight a renewed interest in spirituality.

In a series of studies sociologists have debated the question of why religious attendance rates have been so resilient across decades of major social change (Chaves, 1991, Firebaugh & Harley, 1991, Hout & Fischer, 2002). On the one hand, if marriage and childbearing spur religious involvement, the coming of age and family formation of the baby boomers should have led to increases in church attendance. On the other hand, the previously mentioned rejection of institutions, including formal religion, by the baby boomers should have led to declines in church attendance. Researchers have suggested a number of reasons for this stability. First, a religious revival in the 1980s that increased all cohorts' attendance rates might have masked declining attendance rates across generations. Second, although younger cohorts have lower attendance rates than the older cohorts they are replacing, the large number of baby boomers may be hiding the potential decrease in attendance. Still others feel that life cycle effects remain constant across cohorts and that changes in family structure and cohort size are the key influences on attendance rates.

Regardless of its causes, most researchers agree that the stable attendance and belief rates indicate that secularization has not occurred in the United States, particularly compared with Western Europe, where attendance rates have declined in recent decades. However, the changes in family structure, education requirements, and comparatively low attendance rates among young Americans mentioned above have led some to wonder about the future of organized religion in the United

***Buddhist Meditation.*** *Residents from the Manhattan borough of New York participate in a group meditation session during the sixth annual Change Your Mind Day in Central Park. The free event included meditation teachings from various Buddhist traditions, contemplative exercises, poetry, and music.* AP IMAGES.

States. The ability of organized religion to adapt to these changes may determine its staying power in the United States. As Penny Edgell discusses in *Religion and Family in a Changing Society* (2006), the many church programs that were built around the family structure of the 1950s are often ill equipped for the hectic schedules of modern dual-earner and single-parent families. However, she found that innovative congregations are exploring new programs (day care programs, singles groups, intergenerational activities) that are inclusive of all family forms while continuing to provide a moral vision of the "good family" and that those congregations are flourishing. This study illustrates the ability of religion to adjust to a variety of structural changes.

## RELIGION ACROSS THE LIFE COURSE

Religiosity is very responsive to life changes triggered by common transitions in the life course. As young people transition from adolescence to adulthood, religiosity diminishes. There are several reasons for this. First, as Jeffrey Arnett (2004) noted, developing one's own beliefs and values is a core aspect of becoming an adult. Young people want to decide for themselves what their religious beliefs will be, and as they do so, they may relinquish their parents' beliefs at least temporarily. In addition, many young people pursue education beyond high school, and service attendance is noticeably low among college students. This may be due to the freedom college students have to explore their beliefs when separated from their parents and an increased exposure to people from other faith traditions. Another explanation is that college promotes scientific thinking that is at odds with the supernatural beliefs of many religions (Johnson, 1997). Yet others argue that many college students simply "stow" their religion while they are in college because it is not part of mainstream college culture; they maintain their beliefs but do not voice them or outwardly practice their religion (Clydesdale, 2007).

Family formation is generally the first life course event in adulthood that triggers or renews religious participation (Wilson & Sherkat, 1994). Religious involvement increases with both marriage and childbearing (Mueller & Cooper, 1986, DeVaus, 1982, Chaves, 1991). There are several reasons why religious involvement increases with family formation. Parents may be prompted to become involved to socialize their children into a faith tradition. Families may increase their involvement to take advantage of the social support available to them in many religious institutions. However, it appears that these family formation events do not prompt an increase in religiosity among everyone. Rather, increases in religious involvement occur when people make these transitions at normative ages, not early or late (Stolzenberg, Blair-Loy, & Waite, 1995).

Perhaps the social connections available through religion are more accessible if one is of the same age as other adherents who are experiencing these life transitions. It also could be the case that religious involvement is part of a normative script that those making family transitions at the "right" time are more concerned about following. Also, adults who view religion as intimately connected to family life are more likely to return to their religion (Edgell, 2006). Moreover, it is "traditional" family formation, not just any kind of family formation, that induces an increase in religiosity. For example, those who cohabit or who have children outside marriage do not experience the same increase in religious involvement as those who have a child within marriage (Chaves, 1991).

Two less desirable life course events—divorce and death—usually occur after marriage and childbearing. Although less prevalent than marriage or childbearing, divorce is an increasingly common event that triggers

changes in religiosity, although in different directions for men and for women. Men who divorce are more likely to drop out of religion, whereas women who divorce are more likely to take up religion. Again, these effects apply to those who divorce at normative ages for divorce: the early thirties (Stolzenberg et al., 1995). Morbidity or impending mortality may prompt increases in religiosity as individuals cope with health problems and contemplate their place in an afterlife (Ellison, 1991).

## INFLUENCES OF RELIGION

Religious institutions are family-friendly institutions (Edgell, 2006). D. A. Abbott, M. Berry, and W. H. Meredith (1990) discuss the ways in which marriages and parenting benefit from religious involvement. Religious communities offer families a variety of social supports. Families build friendships with other members that facilitate the exchange of favors such as child care, meal assistance when a loved one is sick, and occasional transportation assistance, all of which are helpful in managing family duties. Some religious institutions provide formal family services such as food pantries, shelters, counseling, and activities for parents, children, and families. Many religions also have teachings about how to treat family members, including directives on respect, selflessness, and forgiveness, all of which should be beneficial for spousal and parent-child relationships. In fact, couples who are more religious report happier and more stable marriages (Call & Heaton, 1997, Scanzoni & Arnett, 1987, Wuthnow, 2007), although it is difficult to know whether religion makes these couples less likely to divorce or if they would be less inclined to divorce even without adult exposure to religion. Finally, religious families may rely on divine intervention to cope with family issues or stress. Believing that there is a higher being guiding family life can relieve pressure in times of strain and help families cope with adversity (Ellison, 1991).

Some researchers argue that various religious traditions may influence family formation in different ways (Wilcox, 2004). For example, conservative Protestant denominations are more likely to promote a male-breadwinner family model that emphasizes the dependence of each spouse on the other, whereas liberal Protestant denominations more commonly emphasize egalitarian relationships. Considerable time is devoted to teachings on parenting in conservative Protestant denominations, which emphasize strict discipline paired with affection and emotional investment (Wilcox, 2004). Although there is debate about which family form and parenting style is most beneficial for families, different religious family directives probably produce different outcomes or different ways of interpreting one's family.

In addition to offering benefits for families, religion can serve other positive purposes for individuals. Specifically, religion and its teachings often make behavioral proscriptions to encourage healthy and lawful behavior. For example, religions promote health by discouraging smoking and alcohol and drug use (Sherkat & Ellison, 1999). In addition, many religions discourage nonmarital sex, a practice that often increases pregnancy and disease risks if the partners are casual or nonexclusive (Barkan, 2006). Religious involvement and belief have been shown to promote positive psychological well-being as well (Bjorck & Thurman, 2007, Willits & Crider, 1988). As was noted above, religious individuals are better able to cope with stress and strain, in part because they believe life circumstances are out of their control and in the hands of a divine being (Ellison, 1991).

## RELIGION AND POLICY ISSUES

Since the year 2000 religion has been granted a greater role in policy debates and federal programs. During his presidency George W. Bush created the White House Office of Faith-Based and Community Initiatives (FBCI), which oversees similarly named centers in eleven federal agencies. The purpose of that action was to "lead a determined attack on need by strengthening and expanding the role of faith-based and community organizations in providing services" (White House, 2007). Particularly relevant to life course transitions, one FBCI center in the Department of Health and Human Services operates the Healthy Marriage Initiative, a program whose goal is to encourage healthy marriages and promote involved, committed, and responsible fatherhood (U.S. Department of Health and Human Services, 2007). Many of the grantees under this federal initiative are faith-based organizations such as Catholic Charities, Lutheran Immigration Refugee Services, Aish HaTorah, and the United Methodist Church. Thus, religious institutions increasingly are playing a role in federal efforts to shape life course events such as marriage.

Immigration is another issue that has generated renewed political interest in part as a result of the faith traditions of recent and future immigrants. The United States has long been a Christian-majority country, with more than 80% of its citizens claiming membership in Christian denominations (Sherkat & Ellison, 1999). However, recent immigrant groups are increasingly non-Christian. Of the top five birth countries of the U.S. foreign-born population in 2000, three were non-Christian nations: China, India, and Vietnam (U.S. Census Bureau, 2003). Moreover, the refugee population in the United States increasingly is coming from predominantly non-Christian nations (U.S. Department of Homeland Security, 2006). The ways in which religion operates in the life course of adults probably will become more variable as the content of Americans' religious beliefs and practices becomes more variable. In addition, the way the new immigrants are incorporated into a very different constituent faith fabric will be a new and stronger test of the American ideal of religious pluralism.

## EMERGING QUESTIONS

The destandardization of the life course, particularly delays in marriage and childbearing and increases in cohabitation and nonmarital childbearing, will challenge religious institutions that long have catered to "traditional" families. Research should continue to monitor the relevance of religion to individual and family lives as those lives unfold in less traditional forms. Will religious institutions continue to adapt to bring nontraditional family forms into the fold? If so, how will they do that?

A related topic that merits more attention is the degree to which the faith-seeking quest of individuals will continue to grow. Wuthnow (2007) and others have noted that current generations of young adults are tinkering with many religious and spiritual beliefs and practices in a quest for a more individualized faith that suits their lives. The emergent church movement is an example of how that quest has become formalized. The emergent church gives individuals a space in which to encounter a number of beliefs and views and, through interaction with one another, build their own belief systems. It will be interesting to follow this and other similar movements to discover the ways in which they are addressing particular needs of contemporary adults. Will the individualized faith-seeking quest continue as this new generation of young adults reaches middle age, or is it specific to this particular life stage? Is it simply a form of religious revival or part of a long-term trend toward the deinstitutionalization of religion? Future research should investigate the changing nature of individual beliefs.

Historically, religion and spirituality have occupied a central place in individual identity. They have many documented benefits, including family and social support and physical and psychological health. The importance and usefulness of religion ebb and flow with life course events and across time as the structure and purpose of religious institutions fit more or less with contemporary individual and family life. As the life course undergoes substantial change, religion will have to adapt to remain relevant to future generations of adults.

**SEE ALSO** Volume 1: *Identity Development;* Volume 2: *Individuation/Standardization Debate; Political Behavior and Orientations, Adulthood; Volunteering, Adulthood.*

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# REMARRIAGE

Given that roughly one in two marriages is not expected to last a lifetime, it is no surprise that remarriage is an important event in the life course of many Americans. Just under half of all marriages in the mid-1990s involved at least one previously married partner (Clarke, 1995), making remarriage unusually common in the United States relative to other countries. The context in which remarriage occurs differs from that of first marriage in a number of important respects. For example, remarriage tends to occur later in the life course than first marriage. In the mid-1990s women's average age at remarriage after divorce was 39.7 (42.5 years for men), compared to an average age of 26.6 years for first marriage (28.6 years for men; Schoen & Standish, 2001). Remarried individuals bring with them experiences and obligations from at least one prior marriage, which may include changed attitudes about relationships, children, or ongoing interactions with a former spouse. Remarriage often creates complex kinship networks involving parents, children, and siblings with varying relationships to one another. It is also important to keep in mind that remarriage can offer an important route to postdivorce economic recovery for women and children, who tend to experience a substantial drop in standard of living when a marriage ends. Because this entry focuses on remarriage in adulthood rather than later life, the discussion emphasizes remarriage following divorce rather than widowhood. The experience of children living in remarried families is the focus of a separate entry.

## REMARRIAGE TRENDS AND PATTERNS

Remarriage is historically common in the United States, although pathways into remarriage have changed substantially over time. Most notably, in the early 21st century remarriage is much more likely to follow divorce than the death of a spouse. Remarriage was more than three times as likely to involve a widowed partner as a divorced partner in 1900 (Jacobson, 1959). By 1990 this pattern had turned on its head, with remarriage more than nine times as likely to involve a divorced partner as a widowed partner (Clarke, 1995). This shift has important implications for the nature of remarried family experiences. For example, in the case of families with children, rather than "substituting" for a parent who has died, a stepparent is often added to an existing set of parental figures in the lives of children (Ganong & Coleman, 2004).

Although remarriage continues to be common in the United States, rates of remarriage declined sharply during the latter half of the 20th century. Between 1970 and 1990, the annual rate of remarriage declined from 123 to 76 marriages per 1,000 divorced women and from 205 to 106 marriages per 1,000 divorced men (Clarke, 1995). Although previously married people are remarrying less, they are no less likely to live with a romantic partner. In fact, the proportion of individuals living with a partner after marital separation increased somewhat between 1970 and the early 1980s (Bumpass, Sweet, & Cherlin, 1991). Cohabitation is more common among separated and divorced people than among the never married, with cohabitation a step along the path to remarriage for the majority of Americans. Indeed, 54% of individuals entering a remarriage during the early to mid-1980s lived with their partner before marriage, compared to only 39% of those marrying for the first time (Bumpass & Sweet, 1989). Cohabiting relationships also tend to be of longer duration among the previously married than among the never married and are more likely to involve children (Bumpass et al., 1991). Thus, nonmarital cohabitation is an important setting for postdivorce family life.

The experience of formal remarriage differs between men and women and across racial and ethnic groups. Estimates for the mid-1990s suggest that just over two-thirds of women but more than three-quarters of men eventually remarry after divorce (Schoen & Standish, 2001). The male advantage in remarriage is even larger after the death of a spouse than after divorce, although this largely reflects gender differences in the likelihood of remarriage at older ages (discussed below). Considerable variation in the likelihood of remarriage also exists across

racial and ethnic groups in the United States. Whereas 58% of non-Hispanic White women remarry within 5 years of divorce, the same is true for only 44% of Hispanic women and 32% of non-Hispanic Black women (Bramlett & Mosher, 2001). Reasons for racial and ethnic differences in the likelihood of remarriage are not well understood.

Those who remarry tend to do so relatively quickly, with roughly half remarrying within 3 years of the time a first marriage ends in divorce (Kreider & Fields, 2002). However, because some people never remarry, it takes about 7 years for half of all people experiencing divorce to remarry (Bumpass, Sweet, & Castro Martin, 1990). It is also important to keep in mind that some separated couples may not obtain a legal divorce until at least one partner wishes to remarry, which means that this figure may somewhat underestimate the average total time to remarriage after partners no longer live together (Sweet & Bumpass, 1987). This fact is particularly important when evaluating racial and ethnic differences in patterns of remarriage. Fully 91% of non-Hispanic White women legally divorce 3 years after separating from a first spouse, compared to only 57% of non-Hispanic Black women (Bramlett & Mosher, 2001). For these reasons, family scholars frequently consider the period "at risk" of remarriage to begin when spouses stop living together rather than at the time of legal divorce.

## DETERMINANTS OF REMARRIAGE

Although considerably less is known about the process of remarriage than first marriage, a number of studies examine which types of people are more or less likely to remarry after divorce. For example, individuals who are older at the time of separation are less likely to remarry than are individuals who are younger when their marriages end. The relationship between age at separation and remarriage is more pronounced among women than men (Sweet & Bumpass, 1987), perhaps because the pool of available marriage partners declines more rapidly with age for women than for men. This occurs for a number of reasons, including sex differences in life expectancy (women live longer than men) and because men tend to marry women somewhat younger than themselves whereas women tend to marry men somewhat older than themselves (Goldman, Westoff, & Hammerslough, 1984). Individuals who married for the first time at a relatively young age also are more likely than others to remarry after divorce, perhaps because they have an unusually strong desire to be married or because they have less experience with life outside of marriage (Bumpass et al., 1990; Waite, Goldscheider, & Witsberger, 1986).

A number of studies consider how children influence the likelihood that their parents will remarry. Children may constrain their parents' resources and time, affect the desire to remarry, or influence a parent's attractiveness to others as a potential marriage partner. Many studies suggest that having a relatively large number of children or having young children reduces a woman's likelihood of remarriage after divorce (e.g., Bumpass et al., 1990; Koo, Suchindran, & Griffith, 1984). Children place less of a constraint on men's chances of remarriage, perhaps because men are less likely than women to live with their children after divorce. Some research suggests, however, that men who are highly involved with their nonresident children are more likely than other nonresident fathers to enter new unions (Stewart, Manning, & Smock, 2003). One possible explanation for this finding is that the kinds of men who are highly involved fathers may also tend to be more committed to their romantic relationships than other men or tend to have better "relationship skills." Living in an area with relatively stricter enforcement of child support laws is also associated with lower rates of remarriage among low-income fathers (Bloom, Conrad, & Miller, 1998), perhaps because such laws increase the perceived financial obligations of previously married men.

Social scientists have also considered how socioeconomic characteristics such as education and earnings influence the likelihood of remarriage. Relatively higher earnings are generally found to increase remarriage among men, but the nature of this association among women is less well understood (e.g., Glick & Lin, 1987; Morrison & Ritualo, 2000; Wolf & MacDonald, 1979). No association between education and remarriage is found for White women, but among Black women remarriage probabilities are lowest for those with the least education (Smock, 1990). After adjusting for group differences in characteristics such as age at separation and number of children, Black women who are high school dropouts have a 60% lower rate of remarriage than otherwise similar Black women with more education. Although most research reports no overall relationship between men's remarriage and education, little work has investigated racial differences in this association among men.

Finally, prior research also considers whether "initiator status" in divorce has implications for subsequent patterns of remarriage. The nature of the divorce experience may differ considerably depending on whether individuals initiate divorce themselves or end their marriages based on a decision made by a dissatisfied spouse. Diane Vaughan (1986) argued that the initiating partner has a critical advantage over the noninitiating partner with respect to time, such that the initiator has a head start on emotional adjustment to divorce and more time to identify potential alternative marriage partners. Evidence suggests that the availability of new marriage partners is sometimes itself a factor in the decision to divorce (South & Lloyd, 1995). It is thus perhaps not surprising that remarriage tends to occur more quickly for initiating

than noninitiating partners (Sweeney, 2002). This difference is most pronounced within the first few years of a marital separation and for women who are relatively older at the time their first marriages end.

## THE NATURE OF REMARRIED RELATIONSHIPS

A number of studies explore the nature of remarried relationships, generally defined as marriages involving at least one previously married partner. Outcomes examined include childbearing, marital power and autonomy, and relationship quality and stability. For example, studies suggest that roughly one-half of remarried women bear children within their new unions (Wineberg, 1990), although the presence of stepchildren from a previous relationship reduces the likelihood of childbearing with a new spouse (Stewart, 2002). The association between stepchildren and childbearing intentions is weaker, however, when children are the biological offspring of the husband rather than the wife in a remarried relationship. This again may stem from the increased likelihood of children living with their mothers after divorce rather than their fathers, as the husband's children are relatively less likely to live in the remarried couple's household.

Research suggests that remarriages tend to be more egalitarian than first marriages and are more likely to involve shared decision making, although findings vary across studies (Ganong & Coleman, 2004). Wives tend to do more housework than husbands in all marriages, yet chores tend to be shared more equally in remarriages than first marriages and tasks are less likely to be segregated based on gender in remarriages (Ganong & Coleman, 2004). Some evidence also suggests that remarried families may tend to organize their finances differently than first-married families, with husbands and wives in remarriages being more likely to keep at least some of their money in individual rather than pooled family accounts (Treas, 1993). This may because of a relatively greater desire for financial independence or because of remarried husbands' and wives' greater likelihood of having financial obligations to family members from a previous marriage. Wives in remarried families also tend to perceive themselves as having greater influence over family financial matters than do wives in first-married families (Ganong & Coleman, 2004).

Although most studies report only small differences between remarried families and first-married families with respect to levels of marital quality, remarriages do tend to be less stable than first marriages. Roughly 36% of women entering a second marriage in the early 1980s ended these unions through separation or divorce within 10 years, compared with only 27% of women entering first marriages during the same period (Kreider & Fields, 2002). The higher instability of remarriages is particularly pronounced within the first few years of a marital relationship (Sweet & Bumpass, 1987). Andrew Cherlin (1978) argued that the lower stability of remarried families may exist because remarriage after divorce is "incompletely institutionalized," meaning that remarriage is not supported by the same laws or shared expectations about social roles and obligations as first marriage. Remarried families have fewer social norms to guide them in making decisions such as which kinship terms to use in reference to individual family members (e.g., should a stepfather be called "Dad" by his wife's children?) or what kind of relationship a stepparent should have with a stepchild (e.g., should a stepparent have the authority to discipline a stepchild?). Remarried families involving stepchildren are also governed by different legal rules than first-married families with only shared biological children. For example, stepparents do not generally have the same legal obligation to provide financial support to a stepchild as a biological child and do not generally have the same presumptive right to visitation with stepchildren after a marriage to the child's biological parent has ended (Mason, Fine, & Carnochan, 2004).

The relatively lower stability of remarriages than first marriages may also result from preexisting differences in the characteristics of people who marry multiple times versus those who marry only once. For example, remarried individuals tend to differ from first-married individuals with respect to divorce risk factors such as level of educational attainment and the perceived ability to cope with divorce (Booth & Edwards, 1992; Castro Martin & Bumpass, 1989). Furthermore, remarried individuals are more likely than first-married individuals to have entered their first marriages as teenagers, which some argue may reflect personality characteristics (e.g., impulsiveness, conscientiousness) or other background factors that make it difficult to choose appropriate romantic partners or maintain relationships throughout the life course (e.g., Castro Martin & Bumpass, 1989).

## DISCUSSION

Although almost half of recent marriages in the United States involve a previously married partner, scholars still know considerably less about remarriage than about first marriage. It is important to study remarriage in its own right because of key differences in the context in which remarriage tends to occur. Much of what scholars do know about trends and differentials in patterns of remarriage comes from data collected by the mid-1990s. In the 1970s Cherlin argued that remarriage was "incompletely institutionalized." As increasing numbers of individuals and families have experienced

remarriage after divorce, has remarriage become more fully institutionalized? Have the norms, expectations, and determinants associated with the formation and stability of remarriage changed over time? In short, despite a large body of research investigating remarriage, much remains to be learned.

**SEE ALSO** Volume 2: *Cohabitation; Divorce and Separation; Family and Household Structure, Adulthood.*

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***Megan M. Sweeney***

# RESIDENTIAL MOBILITY, ADULTHOOD

The United States has long been known, for better or worse, as a nation of movers. According to popular belief, the high geographic mobility rate in American society provides access to opportunity but fosters personal and community disorganization. Social scientific evidence,

however, suggests that the truth about the consequences of mobility lies somewhere between these stereotypic extremes. Social scientists also have learned much about why certain segments of the population are disproportionately likely to move. For the type of movement examined here—residential mobility—life course transitions prove crucial. Local changes of address tend to be triggered by a range of events, including school completion, household formation, marriage, parenthood, divorce, widowhood, and ups and downs in financial status. The development of mobility decision-making models represents an attempt to understand how people adjust their housing situations in response to these events.

## CONCEPT AND MEASUREMENT

Geographic mobility research focuses on movement involving a permanent or semipermanent change of residence. This definitional criterion excludes a variety of temporary phenomena (e.g., commuting, out-of-town work assignments, extended vacations) from consideration. Among permanent moves, residential mobility is distinguished by its local character. Unlike international or interstate migration, residential mobility begins and ends inside the same community, which might range from a single municipality to a metropolitan-wide housing or labor market. In general, the community should be small enough that moves within it do not require the movers to find new jobs (Clark, 1986).

The U.S. Census Bureau operationally defines residential mobility as *intracounty* mobility. Because counties are recognizable government units with stable boundaries, they provide reasonable approximations of community. The fact that they vary greatly in size and shape, however, leaves room for inconsistencies. Some counties in the Southwest cover thousands of square miles, so that "local" moves within these jurisdictions can be quite long. At the other extreme, the multicounty makeup of a metropolis such as Atlanta means that even short moves may cross one or two county lines—and therefore not count as mobility—despite taking place in the same housing market.

Data on residential mobility are available from censuses, large-scale surveys (e.g., the Current Population Survey conducted by the U.S. Census Bureau), and community case studies. A few nations maintain population registers that contain complete residence histories for all persons. Mobility is typically measured with questions asking whether respondents occupied their current dwelling unit one year or five years earlier and, if not, where the previous unit was located (Long, 1988). As the length of the reference interval increases, so do the risks of recall error (because of faulty memory) and underestimation (because of the comparison of addresses at only two dates, which will miss any moves between those dates). Occasional investigations have measured respondents' mobility desires or expectations rather than actual changes of residence. The preferred approach, though, is to use a *prospective design* in which information gathered about people's residential circumstances, including their thoughts about moving, is supplemented with data from a later time point that indicates whether a move has transpired. In a longitudinal survey such as the Panel Study of Income Dynamics, the same respondents are interviewed repeatedly over many years, facilitating analysis of residential mobility within a larger life course framework.

## AGGREGATE PATTERNS

From an international perspective, the footloose reputation of American society appears well deserved. Only a handful of Western countries with large private housing stocks and little tradition of public housing (e.g., Australia, Canada, New Zealand) rival or exceed the United States in overall geographic mobility (Long, 1992). The more modest mobility rates in developing nations can be traced to limited supplies of adequate housing, restricted financing options, and state curtailment of the freedom to move (Huang & Deng, 2006). Few such obstacles exist in the United States, where roughly 40 million people, or 14 to 15% of the total population, have changed addresses annually since 2000, and 120 million (46%) moved at least once between 1995 and 2000. These aggregate mobility levels translate into an average of nearly a dozen moves per person over a lifetime, based on age-specific rates of movement.

About three-fifths of all moves occur within counties, satisfying the definition of residential mobility. Mobility rates vary by region (the West highest, the Northeast lowest) and by state: The percentage of persons moving locally in California, for example, is one-and-a-half times greater than in New Jersey (Berkner & Faber, 2003). An urbanism gradient can also be detected: Central city dwellers are the most likely to make intracounty moves, nonmetropolitan residents are the least likely, and suburbanites rank in between. To some extent these mobility patterns reflect geographic differences in housing market conditions, but they also reflect population composition. Thus, the high percentage of young adults and renters in cities—two especially mobile groups—helps account for higher urban than rural mobility rates.

Although residential mobility is by definition local, its degree of localism remains striking. Intracounty moves cover very short distances on average, with most ending in the neighborhood of origin or no more than a few miles away. This destination proximity makes sense given the limited scope of home seekers' *awareness space*, that portion of the larger community context with which they are

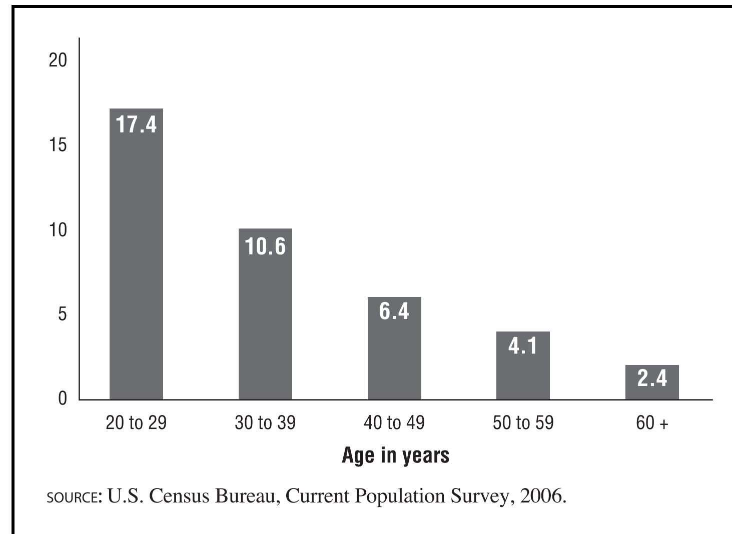



***Figure 1.*** *Adult residential mobility rates, 2005–2006.* CENGAGE LEARNING, GALE.

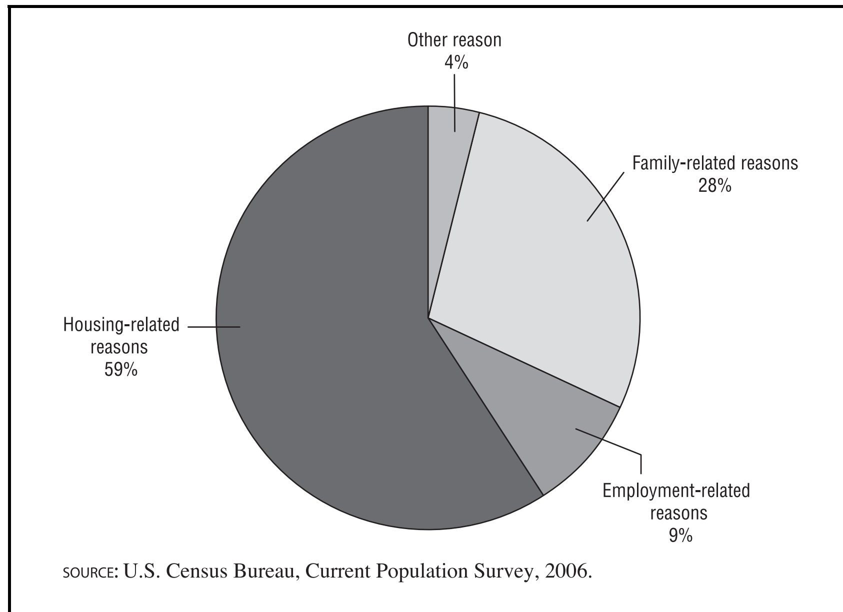
most familiar and which shapes their search. The spatially compressed nature of residential mobility is matched by its temporal compression, or seasonality. Local moves occur more often in the summer, even among households without school-age children, and are least common during the winter months, when weather, work and academic schedules, and the holiday season are deterrents.

Despite its still-impressive level in the early 21st century, mobility was much more common in the past (Fischer, 2002). Historical analyses spanning the 1800s through the early 1900s suggest annual rates of residential turnover in excess of 50% for some American cities. The rates were driven in part by large, transient rooming-house populations and a variety of disruptive events (e.g., high mortality among primary-wage earners, economic downturns, natural disasters) that led to moving. As these forces diminished, and as home ownership became accessible to the masses, the annual total (all movement) and local mobility rates dropped to 20% and 14% of all persons, respectively, soon after World War II. Since then, local mobility has fallen further, whereas inter-county movement has remained stable. One plausible explanation for this trend, in addition to the continued rise in ownership, is the outward expansion of commuting ranges. Moves within metropolitan areas now cover greater distances, crossing into neighboring suburban counties and beyond the U.S. Census Bureau's definition of residential mobility.

## WHO MOVES?

The intertwining of mobility with other aspects of the life course implies that persons at key transition points should be the most likely to move. Because these transitions are concentrated in young adulthood, age is a powerful correlate of mobility (see Figure 1). Steps taken by people in their 20s—achieving independence from their parents, pursuing an education, marrying, having a child—frequently trigger a change of address, not only in the United States but also abroad (Long, 1992). By their mid-30s, many have settled down, perhaps after an additional move to accommodate an expanding family or in response to increased earnings. Subsequent transitions, particularly in marital status, increase the odds of moving again. Divorced or separated persons exhibit markedly higher local mobility rates than their married counterparts, as do never-married individuals.

The fact that these single-person and single-parent households are often economically vulnerable suggests another characteristic underlying their high mobility: income. According to 2003 Current Population Survey data, members of households with incomes under $25,000 have mobility rates double those in the $100,000+ category; a similar differential is observed for persons below and above the poverty line (Schachter, 2004). Needless to say, financial hardship makes it difficult to stabilize one's residential situation. The transition in housing tenure (i.e., whether one owns or rents) from renting to owning is a crucial stabilizing force. Renters are four times more likely than owners to move over the course of a year. Owners stay put because, on average, their dwelling units are of better quality, can be altered more easily, and represent a substantial asset. The transaction costs associated with moving from an owned unit are also higher than moving from a




SOURCE: U.S. Census Bureau, Current Population Survey, 2006.

***Figure 2.*** *Main reason for making local moves, 2005–2006.* CENGAGE LEARNING, GALE.

rented unit. Finally, the longer owners remain stable, the stronger their bonds to home and neighborhood become.

Several potential antecedents of residential mobility prove relatively unimportant. Career-based transitions such as transfers or new jobs, for instance, appear more influential in prompting long-distance than short-distance movement. With respect to race, Blacks and Hispanics move locally more often than Whites. The differences are small, however, and they shrink to insignificant once other characteristics that vary by racial group are taken into account. Those characteristics—age, marital status, family size, income, and tenure—tap, at least indirectly, some of the main motivations and resources shaping a household's probability of moving.

Another way to assess the dominant influences on mobility is to ask people why they have moved. In general, the reasons given align well with the demographic correlates already identified (see Figure 2). Three-fifths of respondents to the Current Population Survey, which contains geographic mobility questions in its annual social and economic supplement, cite housing-related factors as their main reason for making a local move. Such factors include preferences for a new or improved unit, home ownership, affordability, and a better neighborhood. A second cluster of reasons, mentioned by more than a quarter of respondents, focus on family or life course transitions, most notably the establishment of a separate household, changes in marital status, and increases or decreases in family size. Work-related reasons, which figure prominently in intercounty and interstate migration, are rarely offered as explanations for residential mobility (Schachter, 2001).

## DECISION-MAKING MODELS

Attempts to theorize mobility assume that it represents voluntary behavior designed to avoid confusion with mobility "intention" (see later discussion) to maximize well-being. As a consequence, mobility models emphasize decision making. In his pioneering Philadelphia study, Peter Rossi (1955) argued that life course transitions, especially shifts in family composition, create new housing needs that reduce satisfaction with the current dwelling, setting the decision process in motion. Elaborations of Rossi's approach by sociologists and geographers (e.g., Moore, 1972; Speare, Goldstein, & Frey, 1975) have supplemented the life course variables with other factors hypothesized to influence satisfaction, including housing and neighborhood characteristics, local social attachments, and a person's values and standards of assessment. Only if these factors combine to markedly lower satisfaction does a household develop a desire or intention to move. It then initiates a search for possible destinations, the costs and benefits of which are presumably weighed against those of the origin. The ultimate decision to change addresses depends on whether the anticipated satisfaction associated with the chosen housing unit (discounted by the time, effort, and expense of moving) exceeds what is presently being experienced.

Although generic models of this sort continue to guide research, they are subject to numerous caveats and qualifications. One issue concerns just how pivotal a role residential satisfaction plays in decision making. Satisfaction fails to explain the relationship of housing, demographic, and

other variables to mobility, and it rarely has a dominant direct effect itself (Landale & Guest, 1985). More telling is that moves occur despite high levels of satisfaction. People content with their current home might happen onto a "windfall" opportunity that allows them to fulfill long-term housing aspirations. Alternatively, satisfied individuals are sometimes displaced by cost increases, eviction, fire, and the like or feel compelled to leave by events unrelated to housing quality (e.g., divorce or the death of a spouse). Some studies estimate that as many as one-fourth of all local moves are forced or imposed (Sell, 1983). Models that assume the voluntary nature of mobility decisions are less relevant in these cases.

Even when fully voluntary, decision making has been difficult to capture because of its complexity (Michelson, 1977). With the exception of people who live alone, the decision process is collective rather than solitary, involving negotiations among household members at every step. Because members bring their own unique perceptions and standards to the task, they often evaluate the same objective housing circumstances differently. They might also respond differently to stress while contemplating a move. The brief length of many searches, for example, has been attributed to uncertainty about the number of opportunities and competitors, which can pressure home seekers to settle quickly on an acceptable unit (or to stay put) rather than holding out for the ideal destination. Suffice it to say that households vary in how complicated their decision process is.

Households vary in *mobility capital* as well, especially in the United States and other societies with high immigration and growing racial and ethnic diversity. Both ethnographic and quantitative work indicates that English-language ability, time since arrival, citizenship status, and the strength of own-group ties complement more conventional forms of human capital in determining the degree of difficulty newcomers face when navigating the housing market. Their options are further constrained by institutional actors. Despite signs of progress, the 2000 Housing Discrimination Study showed that minority group members (whether foreign- or native-born) still tend to get less favorable treatment from real estate agents and landlords than do comparable Whites (Turner & Ross, 2005). They receive information about fewer units, visit a smaller number, are given less assistance with financing arrangements, and are steered more frequently toward vacancies in minority neighborhoods. Similar discriminatory practices have been documented among lenders and insurers. Thus, the finding that Black and Hispanic households struggle to avoid and escape poor neighborhoods is unsurprising (South, Crowder, & Chavez, 2005).

Such evidence casts doubt on the implicit assumption that households considering a move have complete information about and access to all opportunities. Likewise, moving should not be regarded as the sole strategy available for reducing residential dissatisfaction. After a fruitless search, some individuals revise their standards of evaluation, bringing aspirations in closer agreement with objective reality. Others elect to voice rather than exit, mobilizing politically in response to neighborhood problems. Finally, because homeowners have a more flexible situation than renters, they may physically modify their units (via repairs, remodeling, or adding on) to alleviate dissatisfaction (Deane, 1990).

What the foregoing critique suggests is that a nontrivial thread of unpredictability runs throughout the mobility decision process. This can be observed in the weak correlations among dissatisfaction, the intention to move, destination selection, and actual mobility, not to mention the variable sequence and time frame in which these decision stages are implemented. The ultimate result is that longitudinal studies identify a large proportion of unexpected movers and even more unexpected stayers, people whose decision making turns out to be somewhat convoluted (Duncan & Newman, 1976). In short, models of residential mobility may overestimate the human capacity for rational, effective planning.

## CONSEQUENCES OF MOBILITY

Interest in mobility is motivated in part by the belief that moving is disruptive and therefore harmful to the parties involved. Yet available evidence paints a positive picture with respect to residential consequences. According to 2005 American Housing Survey data, recent movers are far more likely to consider their current dwelling and neighborhood better rather than worse than their previous ones. A parallel finding emerges from research on the concept of the *housing career*, which refers to the succession of units that a person occupies after reaching adulthood and entering the housing market. Most Americans exhibit an upward trajectory over time—toward ownership and higher-quality units and locations—despite occasional setbacks associated with divorce, the loss of a job, or other life events (Clark, Deurloo, & Dieleman, 2003). As already noted, characteristics such as race and nativity can condition how fast and far one's housing career proceeds. Nevertheless, a general pattern of progress holds across all segments of the population.

Nonresidential consequences of mobility have been examined in substantial detail for children, but they remain understudied among adults. Several forms of political participation, including voting, appear depressed in the short run by both local and extralocal moves. This suggests that a practical cost of mobility, the requirement to reregister to vote, rivals social disconnectedness, information deficits, and other explanations of lower civic engagement among movers (Highton, 2000). There are also hints that frequent movement as a child may have long-term (adult)

implications for educational attainment, health, and the "inheritance" of a propensity for mobility (Myers, 1999).

These scattered results should be regarded as tentative, however, until their causal basis is more firmly established. *Spuriousness* represents a particularly serious threat to methodological integrity. As an illustration, premove factors (e.g., poverty, domestic violence) might increase the odds of an address change *and* of civic withdrawal or health problems. Moreover, the mechanisms through which mobility influences a given outcome are unclear in most instances, as is the generality of the effect, which could depend on characteristics of both the mover and the move itself (e.g., voluntary vs. involuntary, type of destination). In light of such complications, one should avoid concluding that residential mobility always has harmful consequences or that it affects all individuals in the same manner.

A different way to think about the impact of mobility is at the community level. Criminologists, for example, regularly identify high residential turnover as a significant determinant of neighborhood crime rates, arguing that it undermines social networks, normative consensus, and collective efficacy. Moves also cumulate in urban structural change. The most obvious scenario of this sort entails racial or ethnic transition, when the strength of own-group preferences produces a combination of entries and exits that alters the population composition of a neighborhood. Less visible but more typical is the pairing of high mobility with neighborhood stability. Often the price, size, and style of housing in an area appeals to a narrow market segment, ensuring that arriving households resemble those departing on many social and demographic attributes (Moore, 1972).

Even in the absence of turnover, changes in neighborhood population mix may occur. This counterintuitive notion—that residential *immobility* leads to change—reflects the joint maturation of households and neighborhoods. Imagine that a number of couples move into a new subdivision at roughly the same time and then stay put. Over the life course, they will experience family expansion (and contraction), income growth, and aging, each of which will be manifested in neighborhood-level shifts. Realistically, events such as financial hardship or marital dissolution will necessitate some mobility and thus influence neighborhood change in more conventional fashion. These events, along with immigration and other macro trends, primarily impact neighborhoods via increased demand, but the supply side of the equation also matters. Housing construction, usually concentrated in peripheral locations, can prompt chains of moves that have ripple effects on neighborhoods throughout the metropolis.

## THE POLICY DOMAIN

Two basic relationships exist between residential mobility and public policy. The first treats mobility as an outcome and consists of federal, state, and local policies that target discriminatory practices in the real estate market. In the United States, civil rights and fair housing legislation has sought to enhance the residential opportunities available to a range of disadvantaged groups. Current laws prohibit housing and lending discrimination based on race, color, national origin, gender, religion, family status, and physical or mental disability. In terms of race, declines in Black–White residential segregation since 1970 suggest that these laws have had some effect in reducing barriers to mobility. The Housing Discrimination Study results cited above, however, caution against an overly optimistic interpretation.

In the second type of mobility–policy linkage, intervention programs use residential mobility as a means to an end, such as fostering desegregation or reducing concentrated poverty and its consequences. The programs typically provide poor families in distressed neighborhoods with vouchers for relocating to subsidized housing in more advantaged neighborhoods. Whereas certain programs (e.g., Section 8) give participants freedom to choose their new setting, others (such as the Gautreaux and Moving to Opportunity experiments) have stipulated which types of neighborhoods are eligible destinations. Fair-share programs in many American cities pursue similar objectives by redistributing public housing across low- and middle-income residential areas.

Evaluations of these mobility-as-means programs have been mixed, and hence their worth is hotly contested. Generally speaking, comparisons of postmove with premove measures reveal that adult participants report better physical and mental health, improved job opportunities, and lower rates of welfare receipt (Goering & Feins, 2003). Some critics, however, emphasize the limited evidence of actual employment and wage gains, maintaining that policies designed to move poor families into home ownership rather than better neighborhoods would be more effective. Although mobility-as-means programs have so far been tried in only a handful of U.S. metropolises, they are candidates for wider application. Indeed, as housing stocks in European nations and elsewhere increasingly shift from the public to the private sector, such programs have become more germane as a way to alleviate poverty and ethnic concentration.

**SEE ALSO** Volume 2: *Employment, Adulthood; Home Ownership/Housing; Immigration, Adulthood; School to Work Transition; Transition to Adulthood.*

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## RISK

*Risk* can be defined as "the probability or relative uncertainty of an anticipated opportunity or outcome" (O'Rand, 2000, p. 228). The concept of risk generally has a negative connotation, implying the chance of harm, but risk can also be viewed positively as an opportunity for gain (Giddens, 1999). The study of life course risk is a relatively new area, initially stemming from a dialogue between sociologists and members of other disciplines such as economists, psychologists, anthropologists, and environmentalists, who have historically studied the concept of risk.

One area of research focuses on individual estimations of risk and subsequent decision making in situations involving uncertain outcomes. Research suggests that people are not good at estimating risk and have difficulty understanding information about the probabilities associated with a broad range of activities (such as gambling and financial investment) and behaviors (such as health-related behaviors associated with disease risk; Tversky & Kahneman, 1974, 1981). People's interpretations of risk information are distorted by a number of factors, such as the way risk information is framed by others—leading to individual perceptions of risk that differ from the estimates offered by experts. Building on this work, researchers have begun to examine the effect of social locations (e.g., social class) on perceptions of risk and decision-making processes, focusing on topics such as purchasing health insurance or investing in the stock market (Hardy, 2000; Heimer, 1988).

A second area of study focuses on the social processes involved in the development and identification of risks. Researchers using a social constructionist perspective question an objective model of risk that treats the probability of particular events as knowable and quantifiable. In general, this body of research examines the social and cultural factors that influence perceptions of risk. Researchers seek to understand how social actors (such as government agencies, social movements, and professions) identify and define hazards and risks (e.g., lifestyle risks such as smoking or technological hazards such as chemical pollution) and the role that power plays in framing debates about risks (Adam & van Loon, 2000; Clarke & Short, 1993).

Another body of research strives to understand risk as a function of broader changes within social structures and social institutions. Anthony Giddens's (1991) discussion of the modern self relies heavily on the idea of modernity as a *risk culture* that results from the combination of sophisticated knowledge, a great degree of uncertainty, vulnerability to unrecognizable and uncontrollable risks, and an emphasis on individual choice. Giddens describes modernity as involving the decline in the proportion of risks that are *external risks* (risks that are relatively predictable, easily calculated, and insurable,

such as disablement and unemployment) and the growth of *manufactured risks* (new risks that are produced by the progression of science and technology, that are ambiguous in nature, and with which society has little previous experience, such as nuclear power, chemical pollution, global warming, and genetic engineering). Manufactured risk is associated with what Ulrich Beck (1992) described as a *risk society*—a society affected by forces of globalization and techno-science and characterized by an increasing preoccupation with controlling the future and eliminating risk (see Elliott, 2002, for a review).

Angela O'Rand's (2000, 2003) development of the concept of *life course risks* recognizes that the transitions that constitute the life course present individuals with socially constrained opportunities and risks, such as unemployment, poor health or disability, and family disruption. She argues that, in addition to increases in risk stemming from globalization and information technology, demographic trends such as increases in life expectancy influence social policy and lead to individualized risk, as governments devise new solutions to address the challenges of supporting the health and financial security of an aging population.

A central theme within research on risk is that a defining aspect of modern society is the privatization and individualization of risk in all aspects of life. One example is the privatization of economic risk—a process that can be thought of as the *devolution of risk* from the state to the individual. An example of the devolution of risk is change in U.S. pension and health policy, in which collective risk sharing declined and individual responsibility for bearing life course risks related to work and health increased (see O'Rand & Shuey, 2007; Shuey & O'Rand, 2004). Historically, insurance institutions developed as a response to societal perceptions of individual risks of income loss, illness, and death, and these institutions were designed to spread risks across populations, such as those defined by citizenship, employment organization, or profession (see Heimer, 1985; Jacoby, 2001).

The idea of *risk spreading* or *risk sharing* is being replaced, however, by an ideology of *risk embracing* that seeks individualized, market-based solutions for economic risks and shifts the perception of risk from one individual vulnerability to loss to one of opportunity for accumulation (Baker & Simon, 2002). For example, new pension instruments (such as defined contribution plans) and diverse health management arrangements that minimize employer responsibility and liability (such as HMOs and other forms of managed care) arrived at workplaces in the United States and other Western countries beginning in the early 1980s. Old, occupation-based welfare systems that insured many workers with lifetime pensions and retiree health insurance have declined in prevalence.

The result has been the increasing devolution of labor market risks to households, which then have greater responsibility for planning for and managing expected and unexpected circumstances associated with income loss (such as job loss or stock market volatility) and health problems (O'Rand, 2000, 2003). Shifting corporate and state risks to individuals has the effect of protecting large institutions while exposing individuals to potentially catastrophic results—although, ironically, the discourse surrounding these changes suggests that they represent autonomy, choice, and opportunity for individuals to excel, rather than risks (Dannefer, 2000).

The research discussed above raises many public policy questions and unresolved issues. First, given the rise of new types of risk in modern society, what does the future hold for welfare state policies originally developed as a form of collective risk management to protect individuals from external risks (Giddens, 1999)? What is the effect of increasingly market-based solutions for managing life course risks on levels of inequality? Finally, at the micro level, more research is needed to better understand how individuals and households make decisions across the life course in light of the prevalence of manufactured risks in modern societies.

**SEE ALSO** Volume 2: *Agency; Economic Restructuring; Health Insurance; Individuation/Standardization Debate;* Volume 3: *Pensions.*

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# ROLES

A *role* is usually defined as a set of expectations for how individuals should behave in certain social situations. It can be thought of as a way of organizing and categorizing social actors. Roles link social behavior, which is easily observed, to social structure and can thus be seen as a link between the individual and society (Goode, 1960). Roles can be used to describe the behaviors and identities of individuals, the social organization of a small group or institution, or the structure of an entire society.

Perhaps because the concept of role has a long history and is used widely across a number of disciplines, the usage of the term varies. *Role* sometimes refers to expectations for behavior, the behaviors themselves, or the social position itself (Biddle, 2000). Although people enact roles but occupy social positions, the term *role* is often used synonymously with *social position*. For example, the social position of "mother" has specific legal definitions in the United States, referring to documents such as birth certificates and adoption papers. This is no guarantee, however, that a person will engage in behaviors that meet society's expectations for "mothering"—the mother may be estranged from her child, or the person doing the mothering may be a sibling or grandparent.

In some situations, the socially constructed demands of a role, an individual's own definition of the role, and the actions of that individual may be highly congruent (Levinson, 1959). In these situations, recognizing the various meanings of role may not be as important. However, in many situations, one or all three of these aspects of roles are in conflict. For example, a member of a particular religious organization may be expected to behave a certain way, but an individual member may not accept all the tenets of the religion and therefore sometimes act in ways that violate the religious expectations.

## ROLE THEORY

Role theory developed in two distinct sociological traditions. In functionalist theory, based on the work of sociologist Talcott Parsons (1902–1979), the focus is on how roles help solve problems of social coordination by assigning behavioral expectations to people in particular situations. In functionalist theory, individuals conform to role expectations created by social consensus. The focus is on formal organizations and status networks. Roles, in this view, help define groups and establish hierarchies. Job titles in a large organization are a good example of functional role. People's assigned roles in an organization tells them who they have control over, who has control over them, who they work with on a daily basis, and what tasks they are allowed to do.

In contrast, interactionist theory focuses on how roles are negotiated between individuals engaged in interaction (Mead, 1934). Rather than seeing roles as templates provided through socialization, the emphasis is on how individuals create role expectations through interaction with role partners. An original focus of interactionist theory was on *role taking*, or the ability to take another person's perspective and to use that perspective in making decisions about one's own behavior. This role-taking perspective was also influenced by sociological theorists Everett Hughes (1897–1983) and Erving Goffman (1922–1982) and is a foundation of symbolic interactionism, a major theoretical paradigm in the social sciences (Biddle, 2000). There may be broad agreement, for example, about the expectations for individuals who enact a student role, but the specifics of the expectations and behavior of students in a particular class will depend on their interaction with the teacher. The teacher may also revise his or her behavior and expectations in interaction with the students.

## AGE AND ROLES

Traditional role theories have little to say about timing, yet timing is an important aspect of roles. Most roles are

associated with age norms, which specify the age range of people expected to fill the role. The *college student* role, for example, carries certain expectations about age, such that the modifiers *traditional* and *nontraditional* clearly express expectations about the normal age range of people who attend college.

If certain roles are appropriate for certain ages, a potential series of role entrances and exits as individuals age is implied. The individual life course is often defined by these role transitions; thus the concept of roles is fundamental to the life course perspective. The transition to adulthood, for example, is marked by maturing into the normal roles of adulthood. Adolescents often look forward to being of legal age to drive, vote, and drink alcohol. Work and family roles both have role entrances that form part of the transition to adulthood—leaving school, entering the full-time workforce, getting married, and becoming a parent.

In contrast, the transition from adulthood to old age is more often marked by role losses and exits rather than the accumulation of new roles (Morgan, 1988). Although older adults may look forward to gaining the role of grandparent, many also exit the work role and experience the death of a spouse. Because the roles that older adults most often enact (grandparent, volunteer) tend to be seen as less demanding than roles characteristic of the middle years (worker, parent), old age has been called a "roleless role" (Burgess, 1960).

Indeed, gerontological theories make explicit claims about the roles that are thought to be best for older adults. Disengagement theory suggests that it would be beneficial, both for individuals and for society, if older adults disengage from the roles associated with the middle years (Cumming & Henry, 1961). By giving up a work role, for example, older adults can focus their efforts on their health and on existential issues and at the same time free up a work position for younger persons just entering the labor force. Activity theory, however, claims that greater well-being in old age is associated with having a greater number and variety of roles (Havighurst, Neugarten, & Tobin, 1968). As a counterpoint, continuity theory argues that it is the continuity of meaningful roles that promote well-being, not the number of roles (Atchley, 1989).

Much of this picture of role accumulation early in the life course and role loss later in life is predicated on what Matilda and John Riley (1994) described as the "three boxes" of the life course. This describes the normative expectations that people will focus on education in their early years, work in their middle years, and leave leisure as the main concern for their later years. This structures age norms for many roles and thus what roles are available to people in different life stages. In contrast to this age-differentiated social structure, an age-integrated social structure would mean that "role opportunities in work, education, and other structures are more and more open to people of every age" (Riley & Riley 2000, p. 267).

## MULTIPLE ROLES

In formal organizations, individuals may be described as having only one role, but most individuals see themselves as occupying multiple social roles, such as worker, parent, spouse, and citizen. The interplay between different roles is a very important stream of roles research. Functionalist role theory suggests that role obligations imposed by society are demanding and that roles are inflexible and difficult to combine (Lynch, 2007). This perspective, then, would tend to view multiple roles in a negative light.

William Goode (1960) defined role strain as the felt difficulty in fulfilling role obligations. In Goode's formulation, individuals are constantly facing choices about which role behaviors to choose, which then necessitates *role bargains*. Role strain might result from individual roles that are difficult to perform or have overwhelming demands; strain might also be a result of role conflict, where the expectations from two or more roles are in opposition to each other. An area of role conflict of interest to many researchers in the early 21st century is that of working parents, who seek to combine roles with very different expectations.

For both men and women, enacting roles many people view as belonging to the opposite gender can create a situation of role conflict. This might be true for women participating in a traditionally male sport or men participating in a traditionally female occupation.

Not all researchers, however, see multiple roles as a problem. In the *role enhancement* perspective, occupying multiple roles improves individual well-being through the accumulation of benefits associated with a variety of roles (Marks, 1977). Paid employment, for example, brings with it the possibility of monetary rewards, feelings of competence, and social rewards. Indeed, satisfaction in one role (perhaps running a successful club) may compensate for problems in another role (such as having an unsatisfying job).

A key resource that may be associated with social roles is social integration. Social integration has been a major theme in sociology since the work of Emile Durkheim (1858–1917) and can be defined broadly to include "both participation in meaningful roles and the network of social contacts" (Pillemer, Moen, Wethington, & Glasgow, 2000, p. 8). Social integration can also be understood in relation to its opposite: social isolation. In the role context, if roles are the link between the

## TIME BIND

The "time bind" generally refers to conflict between individuals' work and family roles, especially their competing time demands. Attention to work–family conflict grew in the 1980s as women entered the labor force in large numbers and workers felt pressured by a tougher economic climate. Concerns about the effect of work demands on individuals and families were brought to the public in books such as Hochschild's (1989) *Second Shift* and Schor's (1991) *Overworked American*.

Hochschild's (1997) later book, *The Time Bind*, centers on the paradox that employees generally want more time with their families, but very few take advantage of "family-friendly" options for part-time work, job sharing, and flex time. Barriers to utilizing these policies include a work culture that values work hours as a sign of commitment (Hays, 1998). Although Hochschild suggested that the time bind may be leading to less satisfaction with family life, other research shows that relative satisfaction with work and family has been fairly stable over time (Kiecolt, 2003).

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individual and society, multiple roles are a measure of social integration.

In general, research generally supports the view of multiple roles as beneficial for individuals. Research links multiple roles to positive physical health outcomes (Verbrugge, 1983) and to reductions in psychological distress for both men and women (Thoits, 1986). Research into multiple roles and care giving suggests that productive roles may have a positive effect on older caregivers (Moen, Robison, & Dempster-McClain, 1995).

### ROLES AND THE LIFE COURSE

Roles are central to the life course perspective, and the life course perspective has added much to the study of roles. First, the life course emphasis on process suggests that looking at roles cross-sectionally (at one point in time) gives a misleading picture. The impact of being laid off from a job, for example, would be quite different for a seasonal worker compared to an individual who had worked continuously for many years. Viewing roles as part of an ongoing trajectory also broadens the concept of a career beyond the realm of paid employment. The parental career, for example, would connect a variety of family-related role transitions into a meaningful trajectory in the same way that the work career potentially connects and gives context to a large number of individual jobs and transitions into and out of work.

Attention to role trajectories is evident in several areas of current research. Research on care giving is increasingly using the concept of the care-giving career (Lawton, Moss, Hoffman, & Perkinson, 2000). Research in the area of substance abuse is using the concept of the role trajectory to study the development of the drug abuse career (Boeri, Sterk, & Elifson, 2006).

Although research attention is being given to various kinds of role transitions (parenthood and retirement, for example), the impact of timing on these role changes also is being examined. Role transitions that occur during a period in one's life that are not in step with normative cultural expectations may be more stressful than transitions that are. Examples of the importance of timing is evident in research on the transition to adulthood. Early, as opposed to on-time, entry into adult roles is associated with aggressive behavior (Roche, Ensminger, Ialongo, Poduska, & Kellam, 2006) and substance abuse (Krohn, Lizotte, & Perez, 1997), but these negative outcomes are likely both a cause and a consequence of these "off-time" transitions.

Related to the issue of timing is the issue of the sequencing of roles. Again, during the transition to adulthood, the normative sequence of roles is entering the labor force, getting married, and then having children. Pamela Braboy Jackson (2004), however, showed that the role sequences that are associated with positive mental health vary by race, gender, and cohort. Whereas the normative sequence of work, marriage, and children was associated with better outcomes for Whites, African Americans who began work, had children, and then married had better outcomes.

The importance of context is a key component of the life course perspective. One application of the role concept would be to examine the interplay and quality of

particular roles, rather than assuming that all roles contribute equally to either role strain or role enhancement. Research on care giving illustrates the importance of this insight (Edwards, Zarit, Stephens, & Townsend, 2002). Both the work role and the care-giving role can lead to costs and rewards for the individual in these roles. For example, it is not necessarily the case that work is beneficial and care giving is stressful for every individual. Research shows that role occupancy alone is not effective in explaining differences in depressive symptoms, but role quality is (Baruch & Barnett, 1986). Although role quality may be important, few researchers have developed instruments to measure this concept.

Another aspect of role context is role identity. Many people will use roles (mother, engineer, team captain, deacon) to describe themselves, suggesting that adopting the behavior of a particular social role may lead to adopting a corresponding role identity. The salience, or importance, of a particular identity for a particular individual may help explain the effect of role quality on well-being.

Historical and cultural contexts are also key to understanding roles in a life course perspective. Different cultures can define the same role in very different ways. Joel Savishinsky (2004), for example, examined the different meanings of the term *retirement* in the United States and India. Historical changes can also shape the expectations and norms associated with roles. Shin-Kap Han and Phyllis Moen (1999) demonstrated that the timing of retirement has been affected by a number of factors that have changed the average age of retirement and have also increased the variability in the timing of this role transition.

Gender and age, of course, are key contexts influencing role trajectories (Hostetler, Sweet, & Moen, 2007). A count of the total number of roles one holds may not be as important for well-being as having a set of roles that is normative, given an individual's age and gender. Other important ways to contextualize roles are by looking at resources.

## GENDER AND ROLES

Gender is a key context influencing role trajectories. Gender is clearly an organizing principle in most societies and shapes the behavior of individuals. Pervasive gender stereotypes both lead to and reflect prevailing gender roles, defined as differing expectations about the behavior of women and men.

In many societies, gender roles assign men primarily to public roles and women primarily to private roles. These behavioral expectations may be formalized in rules and laws, such as early 20th century laws that barred married women from being teachers in most U.S. school districts. Industrialization and modernization, however, led to changes in gender roles. As societies move through the demographic transition from conditions of high mortality and fertility to conditions of low mortality and low fertility, the status of women often undergoes change. Women no longer need to spend most of their lives engaged in bearing and raising children. Along with this demographic transformation comes change in the nature of employment due to modernization, such that more jobs require symbolic skills and are in traditionally female fields such as health and education and fewer jobs require physical strength and are in traditionally male occupations (Kleinfeld & Reyes, 2007).

In modern Western societies, where rules against women's participation in many public domains have been lifted, informal gender roles continue to produce gendered behavior. In many developed countries, for example, women are still primarily responsible for work in the home; this includes the work of care giving, which is still seen as more natural and appropriate for women (Moen, Robison, & Fields, 1994).

Gender roles help determine behavior, such as hours spent on housework, but also shape preferences and beliefs. Prejudice against gays and lesbians, for example, reflects both prejudice against same-sex relationships as well as prejudice against those who violate gender norms such that prejudice is strongest against effeminate gay men and masculine lesbian women (Lehavot & Lambert, 2007).

## FUTURE DIRECTIONS

Because of the wide use of the word *role* and its associated concepts such as gender roles and role strain, it is difficult to summarize the state of research in this area. The difficulty is compounded by the use of role concepts without reference to existing theory and research.

Research in several areas of psychology is showing creative uses of the role concept and role theory. A new perspective on multiple roles focuses on the role switching and role overlapping that most people experience in their everyday lives. Because social settings overlap, especially with new forms of communication, social actors are often enacting many roles in a short time frame. Author Karen Lynch (2007) urges scholars to look at the cognitive or mental strategies individuals use to manage multiple roles.

Role concepts are also being used in the study of personality. The Personality and Role Identity Structural Model connects role experiences, role identity traits, and general personality traits (Wood & Roberts, 2006). This positions the role concept not just at the juncture of society and the individual but also at the juncture of psychology and sociology.

Role identities continue to be of interest to researchers, especially in the area of gerontology. A promising intervention for persons with dementia provides individualized activities corresponding with highly salient role

identities (Cohen-Mansfield, Parpura-Gil, & Golander, 2006). Those for whom family was paramount might construct family trees; others might engage in activities related to a lifelong interest in sports. Other research in gerontology shows that formal volunteering moderates the negative effect of having few or no role identities in older adults (Greenfield & Marks, 2004).

Finally, several social work practice models have a central focus on social roles. Social role valorization has a long history in the disability field. In the United Kingdom, this model is based on the idea that society tends to identify some people as fundamentally "different" and of less value than others. Analysis of the disability role can be used to counteract the negative impact of the role. This model has been expanded to palliative care and a critique of the role of the dying person (Sinclair, 2007). Social role theory uses the concept of social role to improve adaptation and positive social functioning (Blakely & Dziadosz, 2007). More knowledge in academia about the possible practical uses of role concepts and theories could lead to another step forward in this area.

**SEE ALSO** Volume 1: *Socialization; Socialization, Gender;* Volume 2: *Careers; Fatherhood; Friendship, Adulthood; Housework; Motherhood; Occupations; Parent-Child Relationships, Adulthood; Sociological Theories; Volunteering, Adulthood;* Volume 3: *Caregiving; Retirement; Theories of Aging.*

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***Mary Ann Erickson***

# S

## SANDWICH GENERATION

**SEE** *Caregiving.*

## SAVING

*Saving* is accumulating disposable (after-tax) income that is not used for current consumption (i.e., spending) but set aside for future use. Saved income can be held as cash or in transaction accounts such as checking or savings accounts. Funds being saved also can be invested in stocks, bonds, mutual funds, retirement accounts, and real estate.

Individuals save for several reasons (Bryant & Zick, 2006). First, savings may be used to spread lifetime income evenly over the life course. For most individuals, income is relatively low while young, increases with age during the working years, and falls in later life as individuals work fewer hours or fully retire from the labor force. To avoid large disparities in the consumption standard attainable during different stages of the life course, an individual may borrow against future income while young, save during the peak earning years, and then use income saved in retirement.

Second, saving allows individuals to maximize lifetime consumption, or the spending and purchasing that one does over the life course. The nature of economic cycles is such that both prices and interest rates fluctuate over time. By spending or making purchases when costs are relatively inexpensive (from low prices, low interest rates, or both), an individual can maximize consumption on a given income. Conversely, by saving during periods of high prices or high interest rates, an individual can consume more in the future when consumption is relatively less expensive. At a very basic level, this is achieved when families purchase more of a good (e.g., breakfast cereal) when there is a sale; by purchasing additional units of the good for future consumption while prices are lower (and therefore not purchasing at the higher price), the family maximizes consumption.

Third, saving may be motivated by the desire to transfer wealth to future generations. Transfers may happen after death as bequests to children or grandchildren from estates or insurance. Transfers to children and grandchildren also may be made while an individual is still alive, in the form of funds for higher education or assistance with the purchase of a home.

Finally, savings may be motivated by the desire to minimize economic risk and protect against unexpected financial events. This precautionary saving can act as replacement income in the event of an income loss or reduction or as a buffer against unforeseen expenses such as medical costs due to major illness or injury.

### THEORIES AND RESEARCH ABOUT SAVING

Several theories have been proposed to predict saving (and consumption) behavior and explain differences in savings rates over time. Economist John Maynard Keynes proposed the absolute income hypothesis, the first and most basic theory of saving and consumption, in 1936. This theory posits that a positive relationship exists between current income and current consumption and

that higher income households will save a greater proportion of their income than lower income households. That is, as income increases, consumption also increases (although not necessarily in exact proportion to increases in income). However, Keynes hypothesized that the proportionate increase in consumption is smaller (and thus savings higher) for households with greater income (on average) because increases in consumption represents a smaller proportion of income for higher income households than for those with lower income. Although subsequent research has supported the absolute income hypothesis using data collected at one point in time, the hypothesis has not been supported when data tracking income and consumption over time are examined.

Two related theories, the permanent (Friedman, 1957) and life cycle (Ando & Modigliani, 1963) income hypotheses were developed to explain individuals' saving and consumption over the life course. According to these hypotheses, individuals allocate their financial resources, including saving and borrowing, over their lifetimes. Saving is motivated by the desire to spread consumption evenly over the life course; although income may vary over time, saving and borrowing based on an individual's projection of his or her lifetime income allows actual consumption to be relatively unaffected by current income. For example, a college student takes student loans to pay for college, anticipating that the increase in after-graduation income will allow the repayment of the loans. In later life, the accumulation of savings during higher income working years enables a relatively stable standard of living in retirement. Although subsequent research supports the idea that saving and borrowing are used to even out lifetime consumption, the positive relationship between current income and consumption indicates that current income, as well as lifetime income, shapes consumption and saving decisions.

## TRENDS AND PATTERNS IN SAVING

Although estimates of U.S. personal savings rates (i.e., the fraction of personal income that is not consumed) vary, their downward trend over the past several decades is clear. From an all-time U.S. high of 12.2% in the fourth quarter of 1981, the personal savings rate fell to near zero in the last quarter of 2007, the lowest level since the Great Depression. This decline, at a time when the large baby-boomer generation is aging, exiting the labor force, and consuming out of savings accumulated during previous years may result in a considerable economic downturn due to the inability of families to support current consumption levels. Additionally, the shift in employer-sponsored retirement plans from defined-benefit, in which retirement income was guaranteed, to defined contribution, in which the employee is responsible for saving and investment decisions, may threaten the financial security for many in the future. Taken together, the lower savings rate, relatively large cohort approaching retirement, and changes in pension plan coverage may substantially impact individuals' ability to maintain preretirement consumption levels later in life.

Although the overall saving rate in the United States has decreased, the magnitude of the decline varies across social groups. Of considerable concern is the disparity between the savings of low- and high-income families. In 2003 only 10% of the wealthiest 1% of families in the United States did not save, whereas more than 62% of families in the bottom 25% of the wealth distribution did not save (Kennickell, 2006). Similarly, families in the top percentile of the wealth distribution are more than 2.5 times as likely to have an established savings plan as families in the bottom 25%. There are racial disparities in savings as well; whereas 60% of all American workers are currently saving for retirement, only 45% of Black workers and 34% of Hispanic workers are actively saving for the retirement years (Helman, VanDerhei, & Copeland, 2007). These disparities are likely related to differences in the means and ability to save out of income, individual risk tolerance, and consumption preferences but may also be related to differences in access to formal savings vehicles such as employer-sponsored retirement accounts.

## RESEARCH CHALLENGES

One of the critical issues in research on personal savings is the manner in which governmental agencies calculate the average personal saving rate (Reinsdorf, 2007). The National Income and Product Accounts (NIPA) analysis of the National Bureau of Economic Research is a frequently reported source of savings rates. Although these estimates are widely used in literature on personal savings, some researchers argue that these rates underestimate the actual level of savings by omitting capital-gains income (the gain realized from the sale of an asset, such as stocks or bonds, at a higher price than it was originally purchased) and including both working people and retired people (who may be spending out of savings, rather than income resulting in a negative saving rate based on NIPA calculation).

Regardless of the exact rates, the downward trend in personal saving in the United States, as well as some other developed countries including Canada and Australia, is considerable. Scholars have proposed several reasons for this decline, including increases in personal consumption and consumer debt (Parker, 2000), in part due to the increase in the availability of credit card and nontraditional home equity lending (e.g. subprime, adjustable rate mortgages, revolving home equity lines

## INVESTMENT

Investing involves the purchase of a financial or physical asset with the intention of realizing a future return (i.e., an increase in the asset's value or a monetary payment). Investment can be used to both generate funds for the future and to safely mitigate the impact of inflation on savings. A wide variety of vehicles are used for personal investing, including stocks, corporate and government bonds, mutual funds, and real estate.

Acknowledging the trade-off between risk and return is key to investment decisions. Whereas low-risk investments such as U.S. Treasury bonds are relatively safe from any loss of principal (i.e., the original investment amount), they generate a relatively low level of monetary return. Conversely, a higher-risk asset such as corporate stock is subject to market downturn and principal loss, but has a greater potential return, particularly if held long-term. While a diversified investment portfolio consisting of both low and high-risk assets is generally suggested, the risk-return relationship can be utilized to maximize investment performance based on an individual's position in the life-course.

of credit). Other explanations include the aging of the U.S. population and expectations of continued stable macroeconomic policy (e.g., relatively stable inflation and economic growth) and social program support (such as Social Security) among young households. These factors all help to explain the significant decrease in the personal saving rate in the United States, but no comprehensive theory that sufficiently explains the decrease has been proposed (Guidolin & LaJeunesse, 2007).

Cross-national analyses of personal savings rates are complicated by substantial differences in the financial systems and institutional structures of different countries. For example, research indicates that American households save less than households in some other developed nations but that this decrease is tied to differences in retirement behavior and credit constraints (Kirsanova & Sefton, 2006). This use of individual rather than national data has provided some insight into the diversity in personal saving between citizens of different countries, but direct comparisons remain complicated.

### POLICY IMPLICATIONS

As the baby-boomer generation approaches retirement, the importance of saving becomes increasingly important. Several policy implications are related to the current state of personal savings in the United States. The development and implementation of government-sponsored financial education and savings incentive plans has been suggested to increase both awareness of the benefits of saving and the availability of saving options for consumers, particularly for low-income families. The inclusion of mandatory credit counseling for the successful discharge of personal bankruptcy in the Bankruptcy Reform Act of 2005 and the 2003 establishment of the U.S. Financial Literacy and Education Commission are examples of initial steps toward increasing financial education in the United States. To increase the availability of savings vehicles and encourage saving among low-income families, Individual Development Account programs have been established (Comptroller of the Currency Administrator of National Banks, 2005). These programs match the savings of low-income participants, providing additional incentive to save.

Another policy option directed at increasing the personal saving of American families is a shift from income-based to consumption-based taxation. Although a "spending tax," or tax on goods and services consumed rather than on income, could encourage saving by exempting income not used for consumption from taxation, there are several arguments against consumption-based taxes, not the least of which is the potential concentration of wealth among the already wealthy who are able to save and invest more of their income than those with lower incomes.

Although personal savings rates have declined over the past few decades, saving for major life events including retirement remains an important financial issue throughout the life course. Whereas previous generations were able to rely on employer-provided pensions and Social Security for resources in retirement, the shift away from employer pension provision and toward consumerism and easy access to credit creates a challenging environment for saving.

**SEE ALSO** Volume 2: *Consumption, Adulthood and Later Life; Debt; Poverty, Adulthood;* Volume 3: *Wealth,*

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***Angela Fontes***

## SCHOOL TO WORK TRANSITION

The transition from school to work (STW) is a critically important juncture in the life course. Socioeconomic attainment is a long-term process starting in adolescence and encompassing achievement in school, the acquisition of educational degrees and other qualifications, and movement through the occupational career. The individual's completed level of schooling and the point of entry into the labor force are major determinants of subsequent occupational and income trajectories. Psychologically, the transition has significant implications for the development of identity. Finishing school and starting full-time work are key markers of the transition to adulthood, signifying adult status and maturity. Young people who have made the transition from *survival jobs* to *career jobs* are more likely to consider themselves adults, and to be viewed, as such, by others.

### FEATURES OF THE SCHOOL TO WORK TRANSITION

There are major differences in the character of the STW transition both within and across societies. The transition is facilitated when institutional connections between school and work are strong (Kerckhoff, 2003); these linkages vary considerably in contemporary modern societies. For example, high schools in Japan are linked to employers in the community, and recommend their students for the most desirable jobs in order of their academic performance (Rosenbaum, 2001). The apprenticeship system in Germany similarly functions to link students and jobs, as young apprentices' schooling and employment are effectively coordinated, mutually supporting one another, as the youth prepare themselves for entry into particular occupations (Mortimer & Krueger, 2000). The STW transition is much more difficult and prolonged in North America, where secondary schooling is not vocationally specific, credentials (that is, high school diplomas and BA degrees) are general, and youths are encouraged to go as far as they can in higher education (Kerckhoff, 2002). In these circumstances, attaining the next rung on the educational ladder assumes a much higher priority than vocational preparation.

High school students focus on getting accepted into the best college they can, rather than preparing for entry into the world of work. Their teachers and parents encourage this stance, fearing that premature coursework or other preparatory activities related to work might steer them away from college degrees. While approximately two-thirds of high school graduates enter college, many of these young adults are not successful in completing 4-year degrees. As a result, most young people in the United States enter the labor force (as high school graduates or college dropouts) without an educational credential that would signal to employers their capacity to pursue particular lines of work. Many have difficulties in finding acceptable jobs, and lower their sights as they encounter the realities of the job market (Johnson, 2002). Whereas high school dropouts are the most disadvantaged full-time labor force entrants, even the recipients of college degrees (approximately one-fourth of recent cohorts) often flounder from job to job as they try to obtain a better match between their own interests, occupational values and needs, and the experiences and rewards to be obtained in the labor force.

The term *school to work transition* implies a clear, discrete event: completing school and entering the usually full-time work role. However, as a result of changes in both education and work, as well as cultural shifts in the relative prominence and desirability of the youth and adult phases of the life course (Hartmann & Swartz, 2007), this once clear, predictable, and normative

transition has become increasingly delayed and disorderly among recent cohorts of youth in the United States. Instead of full-time immersion in school, followed by similar full-time involvement in work, the lengthy period of transition typically includes long-term involvements in both work and school. Ever-more young people are extending their formal educations through adolescence and into young adulthood. Postsecondary students are becoming older: In 2002, 39% of students who were enrolled in degree-granting institutions in the United States were older than 25 (U.S. Department of Education, 2002). Combining school and work is highly normative throughout the periods of secondary and postsecondary education; most students are employed during the high school years and during college (U.S. Department of Labor, 2000). Shared school and work roles begin in early adolescence—at about age 12 for most of the U.S. youth. Moreover, the transition from school to work is not unidirectional; many young people return to school after leaving and engaging in work full time (Shanahan, 2000). In fact, by age 26, 20% of youths have undergone the transition from school to full-time work at least twice (Arum & Hout, 1998). These trends partly reflect the general nature of educational credentials and the lack of clear connections between employers and schools in the United States, as well as the increasing importance of a college diploma among recent cohorts of youth.

Instead of defining the transition to work as a discrete event, it has come viewed as a long-term process. Patterns of schooling and working during adolescence have long-term implications for postsecondary schooling and wage attainments in early adulthood.

## THE SHARING OF SCHOOL AND WORK ROLES AND SOCIOECONOMIC ATTAINMENT

Most prior investigations of occupational attainment assume that young people make a sequential STW transition. The socioeconomic standing of the family of origin, as well as indicators of academic performance and attitudes toward school, are major determinants of a young person's highest level of schooling. Educational attainment, in turn, establishes credentials for more or less prestigious full-time jobs that are held after the completion of school. Yet, as mentioned before, most youths begin working in adolescence and often continue to be both workers and students during the STW transition. In the United States, the average high school graduate acquires nearly 1,500 hours of employment between his or her 16th birthday and graduation from high school, whereas the typical college graduate gains almost 5,000 hours of employment by the time of college graduation (Light, 2001). Students may work to save money for future education or other purposes, to assert themselves as more "adult-like" in the eyes of parents, teachers, or peers, and to buy clothes, music, or video games. They may also work to pay for educational and living expenses, especially during the college years.

Scholars disagree about the impact of various combinations of schooling and working during the STW transition on future economic attainment (Staff, Mortimer, & Uggen, 2004). One view is that combining work and school, especially during the high school years, ultimately undermines adult attainment because paid work limits time for homework, studying, and extracurricular activities and encourages delinquency and the use of drugs and alcohol. According to this perspective, employment should be discouraged and limited as much as possible prior to full-time entry into the workforce. An alternative view is that longer-term socioeconomic attainment is enhanced when paid work is effectively combined with periods of school attendance. Early work experiences not only benefit adult attainment through on-the-job training and skill development, but also promote *soft skills* that are not learned in the classroom, such as time-management, self-reliance, and other interpersonal skills that facilitate workplace interactions with supervisors, coworkers, and customers.

There is growing consensus that it is the pattern of investment in paid work prior to the completion of schooling that determines its positive or negative influence (Mortimer, 2003). For instance, youths who work intensively (conventionally defined as more than 20 hours per week) during the high school years report fewer hours of homework, lower grade point averages and standardized test scores, and a greater likelihood of dropping out of high school than youths who do not work or who work fewer hours. Research also shows that such intensive work hours during the high school years lessen the likelihood of postsecondary school attendance and the receipt of a college degree in young adulthood.

In contrast, limited involvement in paid work during the STW transition fosters academic progress and longer-term socioeconomic attainment. Moderate work during the high school years is associated with increased grade point averages and greater involvement in school activities than nonemployment. Furthermore, research shows that moderate work hours do not limit time for homework or other extracurricular activities (Schoenhals, Tienda, & Schneider, 1998). Moderate work hours over the duration of high school also increase the likelihood of obtaining a 4-year college degree. Jeremy Staff and Jeylan Mortimer (2007) found this outcome to be linked to continuity in employment patterns. Their analyses of data from the longitudinal Youth Development Study show that a continuous pattern of combining school with low-intensity work throughout

the STW transition accrues advantages during high school, postsecondary schooling, and early occupational careers.

It is important to note that preexisting individual differences in school performance, aspirations, socioeconomic background, ability, and motivation shape subsequent investments in paid work and school during the STW transition. For instance, youths from lower socioeconomic backgrounds work more hours when they are employed than their more advantaged peers (Entwisle, Alexander, & Olson, 2000). Moreover, poorly performing students with low educational aspirations have greater workforce involvement in subsequent years of high school than their better performing peers (Bachman, Safron, Sy, & Schulenberg, 2003). Some research suggests that paid work has little effect on school performance once prior differences in grades, aspirations, problem behaviors, and family socioeconomic standing are taken into account (Warren, LePore, & Mare, 2000). Other longitudinal research on young men shows that working during high school has little benefit for adult wages once differences in unmeasured traits (such as ability or motivation) between workers and nonworkers are adequately controlled (Hotz, Xu, Tienda, & Ahituv, 2002).

It is also important to consider whether distinct combinations of schooling and working during the STW transition have different consequences for future attainment, depending on the youth's own interests, motivations, resources, and capacities. In particular, there is evidence that heavy investment in paid work during high school may not be harmful for those youths who come from more disadvantaged backgrounds. Research shows that paid work increases the chances of high school completion for young, economically disadvantaged males (Entwisle, Alexander, & Olson, 2005). Among urban youths residing in impoverished neighborhoods, Katherine Newman (1999) finds that exposure to conventional adolescents and adults at work can serve as an entry to legitimate occupational career paths and may even encourage educational attainment. Similarly, among contemporary rural youth in hard-pressed farm families, early work experiences can build confidence and instill positive work values under conditions of poverty and economic distress (Elder & Conger, 2000). Staff and Mortimer (2007) find that steady work is especially conducive to the attainment of 4-year college degrees for youth who display limited educational promise at the start of high school. Furthermore, Jennifer Lee and Staff (2007) show that high intensity employment during high school does not influence dropout for those who have the greatest propensity to pursue such an employment pattern.

## TWO IDEAL TYPICAL SCHOOL TO WORK TRANSITIONS

Based upon what is known about the relations between work and school roles and what is known about how individuals choose various work and school patterns, contemporary young people can be classified into two ideal typical tracks with varying emphases upon school and work. These tracks commence as early as age 14 and 15 and continue as young people make the STW transition. Youths who come from more advantaged backgrounds, and who are more strongly oriented toward schooling, are more likely than their less advantaged counterparts to pursue steady work during high school (i.e., limited hours but near continuous duration) and they invest more in postsecondary education, especially in 4-year colleges (Staff & Mortimer, 2007), during the years following. In contrast, youths from more disadvantaged backgrounds, and those who have poorer grades and lower educational aspirations, are more likely to be employed intensively during high school. These more intensive workers have little likelihood of acquiring 4-year college degrees. These class-differentiated tracks, commencing at the start of high school and persisting through the transition to adulthood, have lasting implications for future socioeconomic attainment. However, when youth from lower socioeconomic backgrounds follow the first track, involving steady work during high school, their educational attainment and longer-term wages are enhanced.

## CONCLUSION AND FUTURE DIRECTIONS

In the contemporary United States, where institutional bridges between school and work are notably undeveloped and the sharing of school and work roles often begins in early adolescence, employment experiences appear to be an integral part of human capital acquisition during the STW transition. In decades past, young people typically made a sequential transition from full-time school to full-time work, a transition that could be characterized as a discrete event. There are two ideal typical routes that now characterize the more prolonged STW transition among contemporary cohorts of young people. One route involves less intensive employment during high school, followed by continued part-time employment and postsecondary educational investment, most likely in 4-year colleges. This pathway is more common for youths of higher socioeconomic origins, but is especially beneficial for young people of lower socioeconomic status. A second route involves early intensive work experience during high school that is less conducive to higher educational attainment. These workers are less likely to achieve 4-year degrees, irrespective of their parents'

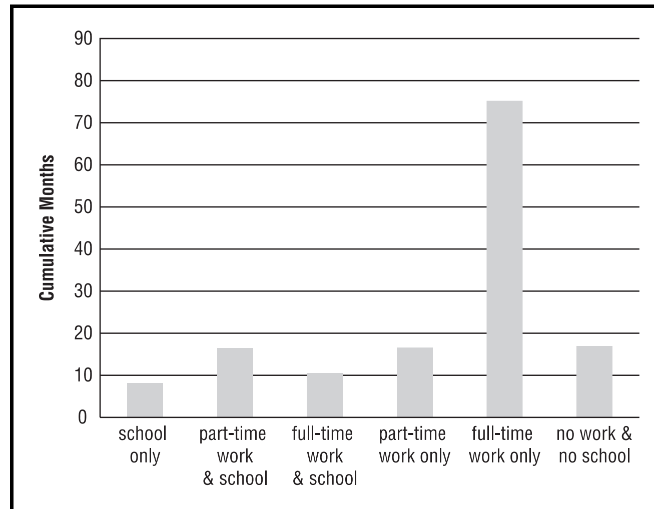


***Figure 1.*** *Cumulative Months of Work and School during the STW Transition (age 18–30).* CENGAGE LEARNING, GALE.

educational backgrounds. When they reach adulthood, these workers begin to show lower hourly wage rates than youths who worked less intensively in adolescence and were more likely to pursue postsecondary schooling in the years immediately following high school.

Whereas this review addresses patterns of temporal investment in work during the STW transition, little is known about the impact of the quality of early employment for educational and wage attainments on the quality of adult work and on adult occupational commitment and job satisfaction. For example, the presence of a supportive supervisor in the workplace may be especially important for youths whose own parents lack the experience and resources to effectively guide them toward higher education and jobs that will sustain a middle-class style of life. Positive work experiences, providing learning opportunities, skill development, and affirming one's role as worker may be especially important for the disadvantaged youth who may have few alternative sources of positive vocational identities, work values, and economic efficacy. Such experiences in the workplace could be particularly important in enabling youths of lower socioeconomic origin to make a successful STW transition, enabling them to find jobs that represent good fits with their interests, values, and capacities. High school guidance and career counselors, parents, and others concerned with the successful development of youth should be aware that early work experience has much to offer young people, particularly if their hours of work are restricted and if they learn to effectively balance schooling and employment through steady participation in the labor force.

**SEE ALSO** Volume 2: *Careers; Educational Attainment; Employment, Adulthood; Transition to Adulthood.*

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# SEGREGATION, RESIDENTIAL

Residential segregation refers to the situation in which members of social groups live separately from members of other groups within a larger geographic entity. The term is most commonly used to describe the extent to which groups occupy distinct, separate neighborhoods within a city or metropolitan area. Cities can be segregated along many sociocultural dimensions, including social class, ethnicity, race, and even religion. In the United States, the most important dimension of residential segregation in terms of both prevalence and consequences is racial and ethnic. Of special interest is the spatial separation of racial and ethnic minority groups from non-Hispanic Whites. The spatial separation of populations can have profound consequences for a group's collective well-being as well as their inclusion or exclusion in the larger society. This is because resources are unevenly distributed across geographic space. Therefore, where one lives determines the safety of neighborhoods, quality of schools and housing, and availability of public amenities such as libraries and police stations.

## MEASURES OF SEGREGATION

The idea of residential segregation makes intuitive sense to most people. However, measuring segregation is complex because segregation can be conceptualized in multiple ways. Sociologists Douglas Massey and Nancy Denton (1988) identified five dimensions of residential segregation, each of which provides a different way of thinking about how race and ethnic groups are separated from each other within an area: (a) evenness, (b) exposure, (c) clustering, (d) concentration, and (e) centralization. *Evenness* refers to how groups are distributed over geographic space within an area—for example, the proportions of Whites and Blacks across all neighborhoods in a city. *Exposure* refers to a person's potential for contact with members of other groups. *Clustering* describes spatial distributions in which minority neighborhoods are tightly clustered to form a large contiguous area (as opposed to being dispersed throughout a city). *Concentration*, a closely related concept, captures the degree of crowdedness of a group within an area. Finally, *centralization* assesses whether a minority group is centralized around the urban core or spread out along the periphery of a city. The term *hypersegregated* is used to refer to areas where segregation scores are high on four out of the five dimensions.

Evenness and exposure are the two most commonly measured dimensions of residential segregation. Evenness is typically gauged by a measure known as the dissimilarity index. Values for the dissimilarity index range from 0 to 100, with values of 0 representing complete integration and 100 representing complete segregation. It is interpreted as the proportion of members of one group who would have to move—assuming that members of the other group remain where they are—in order to obtain an even distribution of the groups across an area. Examples of U.S. metropolitan areas where Blacks and Whites are highly segregated on the evenness dimension (values greater than or equal to 80) are Detroit, Chicago, Newark, and New York. Two common measures of contact are the exposure and isolation indices. The exposure index describes the probability that members of

group A will come into contact with members of group B. Values for the index also range from 0 to 100, with higher values representing a greater probability of one group coming into contact with a member of another group. Blacks have the least probability of exposure (i.e., exposure values less than 20) to Whites in the Los Angeles, Chicago, Detroit, Miami, New York, and Newark metros. The isolation index assesses the degree to which members of a group live in neighborhoods where the other residents are predominantly of the same racial or ethnic group (i.e., *ghettoization*). Unlike the dissimilarity index, the isolation index is sensitive to group size. Values are low if the minority group is small but high if the group is large. The range for the index is from 0 to 100, with 100 reflecting complete ghettoization. Metros where Blacks are highly ghettoized (values greater than 70) include Chicago, Detroit, Cleveland, and New Orleans.

## TRENDS IN RACIAL RESIDENTIAL SEGREGATION IN THE UNITED STATES

American cities were not always characterized by high levels of racial residential segregation. During the 19th century, non-Hispanic Blacks were less segregated from the majority group (i.e., White Anglo-Saxon Protestants) than White European immigrants (Lieberson, 1980). During the 20th century, segregation between Blacks and Whites increased and segregation of European immigrants decreased. By the 1970s and 1980s, Black–White segregation was so high that in some cities, such as Milwaukee, Cleveland, New York, and Los Angeles, the dissimilarity index was in the 80s and 90s (Massey & Denton 1987, pp. 815–816). Hispanic–White and Asian–White segregation have always been much lower than Black–White segregation. In fact, extreme Black–White residential segregation is one of the hallmarks of American society; no other developed, pluralistic society has segregation levels as high as those in the United States.

The overwhelming conclusion from the cross-national literature is that hypersegregation does not exist in the Canadian or European context (Huttman, 1991; Massey, 1985). Although segregation and ethnic clustering can be found in virtually every immigrant-receiving country, segregation levels do not approach those for Blacks and Whites in the United States. Not only is racial residential segregation lower in Europe, but where it does exist, the cleavage is not necessarily between Blacks and Whites. For example, geographer Ceri Peach (1996) examined the residential segregation of six major racial and ethnic minority groups in Great Britain. He found that Bangladeshis and Pakistanis were more segregated from British Whites than were Afro-Caribbeans or Africans. Blacks in Britain were the least segregated out of all six ethnic minority groups under study. Likewise, in Sweden, White and non-White immigrants have similar degrees of residential separation from Swedes (Linden & Lindberg, 1991). Socioeconomic differences between immigrants and natives, as well as cultural factors, have been posited to explain the patterns observed in Western Europe.

Studies based on the 2000 U.S. Census show that segregation between non-Hispanic Whites and minorities has declined throughout the 20th century. Black–White segregation in 2000 was at its lowest level since 1920 (Iceland, Weinberg, & Steinmetz, 2002). Yet there are regional variations in the decline of Black–White segregation across the United States. The Northeast and Midwest continue to have high levels of Black–White segregation, especially in former manufacturing cities such as Cleveland, Chicago, and New York, where housing is older (Cutler, Glaeser, & Vigdor, 1999). However, in regions with new housing and population growth, particularly the south and southwestern regions of the United States, Black–White segregation has declined markedly. Segregation among Asians and Hispanics has declined as well (Glaeser & Vigdor, 2001).

## THE CAUSES OF RESIDENTIAL SEGREGATION

A significant amount of scholarly attention has been given to explaining why residential segregation occurs and persists over time. Spatial assimilation theory is one of the leading frameworks used to understand processes of residential segregation (Alba & Logan, 1993). A central tenet of spatial assimilation theory is that spatial distance equals social distance. In other words, people want to live with others who are like themselves; spatial distance reflects some underlying social chasm between the separated groups that may be purely subjective or based on some real objective difference. The theory outlines a linear progression of spatial integration in which minority groups (and immigrants) initially start out in a state of geographic isolation from the dominant group (i.e., non-Hispanic Whites). Typically, minorities and immigrants will reside in poor central city areas where housing is cheap and one's neighbors are other minorities or immigrants. The theory assumes that this initial state of spatial separation is due to socioeconomic and cultural differences between minorities (or immigrants) and non-Hispanic Whites. Over time as minorities increase their socioeconomic status, they not only become more socially and culturally acceptable as neighbors, but they can also afford housing in predominantly White or racially mixed neighborhoods. These types of neighborhoods are more desirable because they tend to have better public amenities, have lower rates of crime, and are located in resource-rich suburbs. For

immigrants, acculturation—particularly the acquisition of the English language—along with increased socioeconomic status helps to diminish the cultural and socioeconomic gaps between native and foreign-born persons, thereby facilitating residential integration.

The spatial assimilation model has been criticized for its failure to explain the persistence of residential segregation among Blacks and darker-skin Hispanics (e.g., Puerto Ricans). Despite increases in income and education or cultural assimilation, Blacks and Puerto Ricans remain segregated from Whites. An alternative, although not necessarily contradictory, theory of residential segregation has been forwarded to explain the persistent segregation of Blacks and darker-skin minorities. Place stratification theory argues that residential patterns of different racial and ethnic groups reflect their relative standing in the larger society. In the United States, Blacks are at the bottom of the hierarchy, and race is a "master status," barring access to desirable, racially integrated neighborhoods (Charles, 2003).

The specific mechanisms for how race constrains the social mobility of Blacks and, by extension, other racial and ethnic minority groups are a hotly contested topic in the residential segregation literature. Three individual-level hypotheses have been influential: in-group preferences, racial proxy, and racial stereotyping. The in-group preferences thesis attributes residential segregation to varying degrees of ethnocentrism between the races. It is argued that all groups exhibit ethnocentrism and preferences for same-race and same-ethnicity neighbors. In the racial proxy hypothesis, it is argued that because Black neighborhoods are often associated with poorer amenities, inferior schools, and high crime, White avoidance of Black neighborhoods is not due to race per se but rather the desire to avoid disadvantaged neighborhoods and poor neighbors. Finally, the racial prejudice or discrimination thesis attributes racial residential segregation to active out-group avoidance or domination. It is believed that White prejudicial attitudes and racial discrimination cause Whites to avoid neighborhoods with Blacks and other racial and ethnic minorities.

## THE CONSEQUENCES OF RESIDENTIAL SEGREGATION FOR THE LIFE COURSE

Residential segregation can have negative consequences for individuals' life chances because resources are unevenly distributed across space. In general, majority-White, suburban areas tend to have better public amenities (such as well-maintained parks and playgrounds, safer streets, and high-quality public schools with well-trained teachers and smaller class sizes), economic resources, and higher-quality housing than non-White, central city areas. The geographic disparity in public resources stems from interactions among social class, race, and geography. Where one resides determines who one's neighbors are, which in turn affects the degree of political power, economic clout, and, ultimately, resources to which one has access. The high correlation between socioeconomic status and race means that middle-class areas will, on average, consist more of Whites than non-Whites. The overlap among race, place, and class means that, irrespective of a family's socioeconomic status, Blacks and other racial and ethnic minorities will, on average, reside in socioeconomically disadvantaged and segregated neighborhoods.

Research has shown that access to resources and amenities can affect health outcomes across the life course. For example, a study of neighborhood drug stores in New York City showed that pharmacies in non-White neighborhoods tend to carry fewer pain medications than those in predominantly White neighborhoods (Morrison et al., 2000). Another study found that grocery stores that stock nutritious food are less easily accessible for residents in segregated neighborhoods (Zenk et al., 2005). Segregated Black neighborhoods bear the burden of housing unhealthy establishments. Black neighborhoods tend to have a disproportionately high density of fast-food restaurants (Kwate, 2008)—no doubt contributing to the obesity epidemic among low-income minorities. Liquor stores and advertisements for unhealthy behavior, such as cigarette smoking and alcohol consumption, are also disproportionately concentrated in low-income, predominantly Black neighborhoods (Hackbarth, Silvestri, & Cosper, 1995).

The physical deterioration of the built environment (e.g., building and physical infrastructure, quality of transportation, and so on) often associated with poor, segregated neighborhoods also can have harmful effects on the health of children and adults. Poor housing conditions, for instance, can expose residents to lead and other harmful elements such as mildew and disease-carrying rodents (Hood, 2005). Residential segregation has also been shown to increase residents' exposure to airborne pollutants (Lopez, 2002), elevate the cancer risks associated with ambient air toxins (Morello-Frosch & Shenassa, 2006), and increase both infant and adult mortality rates (Polednak, 1993). Additionally, physical activity in segregated neighborhoods may be difficult due to the absence of walkable spaces or safe green spaces for children's play and recreation in segregated areas (Holt, Spence, Sehn, & Cutumisu, 2008).

Another way that residential segregation influences life course development is through exposing residents to violence. Violence is a regular feature of life for many residents of segregated urban neighborhoods in the United States. Children living in segregated neighborhoods experience frequent and ongoing exposure to guns,

knives, drugs, and random violence (Ofosky, 1999). Additionally, the burden of violence disproportionately falls on the shoulders of Black Americans. The homicide rate for African Americans ages 15 to 24 years in 1999 was 38.6 per 100,000 persons. This was twice the rate for Hispanics (17.3 per 100,000 persons) and 12 times the rate for non-Hispanic Whites (3.1 per 100,000 persons) of similar age (Krug et al., 2002, p. 11). In addition to mortality risks, living in resource-poor, segregated neighborhoods can have adverse effects on transitions into and out of different life stages. For example, ethnographic studies have shown that minority youths living in harsh, segregated neighborhoods where violence is an everyday occurrence may supplant mainstream norms of success with alternative norms such as sexual prowess, teenage pregnancy, and displays of aggression (Anderson, 1999). These alternative markers of social success may bring short-term satisfaction but often derail long-term transitions into adulthood roles, such as steady employment and marriage. Instead, youths may find themselves rotating in and out of prison, navigating the welfare system, and raising children without the support of a partner.

## (SUPPOSED) BENEFITS OF RESIDENTIAL INTEGRATION

Implicit in spatial assimilation theory is the idea that spatial propinquity helps to generate meaningful social relationships among neighbors. Coming into contact with people on the streets, on the subway, or at the supermarket does not provide opportunities to develop primary social relationships, nor does living in the same neighborhood guarantee that people would know their neighbors on a more intimate social level. However, coresidence in integrated neighborhoods is assumed to provide opportunities to develop primary social relationships through community activities and organizations. These primary social relationships, particularly with middle-class and non-Hispanic Whites, may have benefits for minorities in the form of job-generating social networks, a wider array of positive adult role models for children, greater social capital, and so on.

Despite the intuitively appealing premise that residential integration may foster beneficial primary social relationships between minority and majority group members and help to bridge social class, racial or ethnic, and cultural divides, the empirical evidence to support this notion is weak. Research shows that people's social support networks are not tied to neighbors within their neighborhood of residence. Neighborhood and family ethnographies from the Three-City Welfare Project show that the social support networks of poor families are not located in their neighborhoods of residence (Matthews, Detwiler, & Burton, 2005). One possible explanation for the lack of within-neighborhood social support networks is the density of multifamily residential units in low-income, segregated neighborhoods. The design of multifamily dwellings can adversely affect interaction patterns by discouraging social interaction and thereby increase residents' feelings of social isolation and impede the cultivation of strong social support networks (Evans, Wells, & Moch, 2003).

## POLICY ISSUES

The research evidence suggests that public policy can best ameliorate the negative effects of residential segregation on life course development in the short run by improving the physical conditions of segregated neighborhoods and minimizing public disorder. For instance, greater attention can be given to making segregated neighborhoods health-friendly by investing in safer parks and playgrounds, making streets more walkable for residents, and altering zoning laws such that there is a greater balance of healthy and unhealthy establishments in low-income, Black neighborhoods. Similarly, neighborhood development or renewal projects can improve community cohesion and strengthen within-neighborhood social support networks by directly incorporating building designs and land use that encourage socialization. In the long term, the goal of public policy should be to eliminate racial residential segregation. This would entail targeting the social and institutional mechanisms that perpetuate segregation—a feat that is, at best, daunting given the lack of consensus in the field regarding the root causes of segregation. However, recent declines in segregation are promising and suggest that the United States may potentially achieve low segregation levels on par with other developed, pluralistic countries.

**SEE ALSO** Volume 2: *Health Differentials/Disparities, Adulthood; Home Ownership/Housing; Immigration, Adulthood; Neighborhood Context, Adulthood; Policy, Health; Poverty, Adulthood; Racism/Race Discrimination; Residential Mobility, Adulthood; Social Integration/Isolation, Adulthood.*

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***Zoua Vang***

# SELF-EMPLOYMENT

Self-employed persons are those who earn income from their trade or business, who set the terms of how, when and where they perform their work; and who assume all the risks and responsibilities of their entrepreneurial activities. Thus, self-employed persons include those who own businesses as sole proprietors or in partnerships, those who work as independent contractors, and those who work as consultants. The ranks of the self-employed include lawyers, tutors, plumbers, child care providers, cleaners, wedding planners, and Web site developers. The self-employed are a heterogeneous group, and to complicate matters further, individuals can be both employees and self-employed in different income-generating activities at the same time. Although the self-employed must still meet the demands of clients and contactors and cede some decision making to those with whom they contract, unlike wage work, to be self-employed means that a worker has some autonomy because he or she is not employed by another and that the individual derives an income from his or her own work effort. However, this autonomy can also be a source of instability, because nearly all self-employed workers are not afforded the same protections that are available to wage workers, such as social insurance, including unemployment, health and disability benefits, and labor contracts.

After several decades of decline, self-employment experienced a rebirth in the 1970s in industrialized countries. It is unclear whether the rise in self-employment is the result of a vibrant, entrepreneurial middle class or declining economic opportunities for the working class and those in nonprofessional occupations. The scholarly debate regarding the location of the self-employed in the social class structure is complicated by the heterogeneity of the self-employed. For some, self-employment is a means of obtaining upward mobility. However, the widely varying economic successes of the self-employed are linked to the gender, race/ethnicity, and the professional and nonprofessional status of the worker. It is an empirical question whether self-employment reduces or exacerbates existing inequalities found among wage-employed workers. Therefore, the role of self-employment is important not only for the life course of self-employed individuals, but also for understanding the state of the economy as a whole.

## MEASUREMENT ISSUES AND SELF-EMPLOYMENT

Just as defining self-employment is difficult, so is measuring it. Most data gathered on the self-employed in the United States are based on individual self-identification. The Current Population Survey (CPS), a monthly survey of employment and unemployment administered by the Census Bureau, is the most frequently analyzed dataset when it comes to self-employment. The CPS divides workers into four categories: government, private, nonprofit, and self-employed. If self-employed individuals indicate that their business is incorporated, they are reclassified as employees of their own company whereas the unincorporated are categorized as self-employed. The introduction of the questions related to incorporation in 1967 has created confusion regarding the accuracy of self-employment measures due to increasing rates of incorporation.

## RECENT TRENDS IN SELF-EMPLOYMENT

From the late 1940s to the 1970s, self-employment rates fell dramatically. However, since the 1970s the trend has been reversed in nonagricultural sectors. By 2003, 10.3 million U.S. workers were self-employed, primarily in construction, professional, business, and other services. In 2004 self-employed workers comprised 7.5% of the total U.S. workforce (Hipple, 2004). The incorporated self-employed tend to have advanced degrees whereas the unincorporated self-employed tend to have less than a high school diploma, indicating a large gap in the quality of self-employment. The self-employed also tend to be older than wage workers, with those 65 and over comprising 19.1% of the self-employed whereas only 2% of the self-employed are aged 16 and 24 (Hipple, 2004). Unlike older workers, who are more likely to have retired from wage employment, younger individuals typically have not yet acquired the necessary capital and managerial skills to start their own business.

The gender composition of the self-employed is unequal but changing. Although men are more likely to be self-employed, since 1975 women's participation has grown by 60%, compared with men's growth of 20% (Blau, 1998). The factors leading to and the economic returns from self-employment are linked to gender in complex ways. Professional status of the worker is key to understanding these linkages. Among professionals, women receive higher returns for skills if self-employed, compared with findings in wage-employed women. The factors leading to self-employment among professionals do not differ by gender, and women receive the same increase in earnings for becoming self-employed as do men (Budig, 2006). However, self-employment does not appear to reduce the gender gap in earnings that is found among wage-earning professionals. Among nonprofessional workers, the importance of gender is more pronounced (Arum, 1997; Budig, 2006).

The primary causes of women's self-employment in this group are family factors: number of children, marital status, and having a self-employed husband. None of these factors matters for men's self-employment among nonprofessionals. Gender occupational segregation is greatest among self-employed nonprofessionals, as is the gender gap in earnings. In contrast to professionals, among nonprofessionals self-employment appears to exacerbate gender earnings inequality. Thus, family factors powerfully shape women's self-employment in nonprofessional work and gender earnings gaps are largest among nonprofessional self-employment. In contrast, women engaged in professional self-employment are more similar to men and reap similar rewards from self-employment as men do.

Because self-employment is often described as a route to prosperity, understanding race/ethnic differences among the self-employed is important (Bates, 1997). Whites have higher levels of self-employment than Hispanics and African Americans, and this may result from some advantage among whites in asset accumulation and in consumer and lender discrimination. Family background and parental experience with self-employment are among the most important predictors of an individual becoming self-employed (Aldrich, Renzulli, & Langton, 1998). Because African Americans have historically had low levels of self-employment, the likelihood of subsequent generations of African Americans becoming self-employed is reduced. Stratification also appears

| Characteristic | Unincorporated Self-employed | | | Incorporated Self-employed | | | Wages and Salary Workers' | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Men | Women | Total | Men | Women | Total | Men | Women |
| **Age** | | | | | | | | | |
| Total, 16 years and older: | | | | | | | | | |
| Thousands | 10,295 | 6,430 | 3,865 | 4,956 | 3,626 | 1,330 | 122,358 | 63,236 | 59,123 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 16 to 19 years | 9 | 10 | 7 | 2 | 2 | 5 | 4.7 | 4.5 | 5.0 |
| 20 to 24 years | 2.6 | 2.8 | 2.3 | 1.0 | 9 | 1.2 | 10.7 | 10.8 | 10.6 |
| 25 to 34 years | 15.6 | 15.3 | 16.2 | 11.6 | 11.5 | 12.0 | 23.0 | 24.1 | 21.8 |
| 35 to 44 years | 26.4 | 25.4 | 28.0 | 28.7 | 29.0 | 27.8 | 25.1 | 25.4 | 24.8 |
| 45 to 54 years | 27.1 | 27.2 | 27.0 | 30.8 | 30.6 | 31.4 | 22.5 | 21.7 | 23.4 |
| 55 to 64 years | 18.8 | 19.1 | 18.3 | 20.5 | 19.9 | 22.0 | 11.1 | 10.7 | 11.6 |
| 65 years and older | 8.5 | 9.2 | 7.5 | 7.2 | 7.8 | 5.6 | 2.7 | 2.7 | 2.8 |
| **Race and Hispanic or Latino ethnicity** | | | | | | | | | |
| White | 88.2 | 88.7 | 87.3 | 90.1 | 90.5 | 88.9 | 82.2 | 83.6 | 80.7 |
| Black or African American | 5.8 | 5.6 | 6.1 | 4.1 | 4.2 | 3.9 | 11.4 | 10.0 | 12.9 |
| Asian | 3.9 | 3.5 | 4.4 | 4.6 | 4.2 | 5.9 | 4.2 | 4.3 | 4.1 |
| Hispanic or Latino | 9.3 | 10.2 | 7.7 | 5.5 | 5.4 | 5.9 | 13.2 | 15.2 | 11.0 |
| **Country of birth and U.S. citizenship status** | | | | | | | | | |
| U.S. born | 87.2 | 86.6 | 88.1 | 87.0 | 86.8 | 87.3 | 85.5 | 83.4 | 87.9 |
| Foreign-born | 12.8 | 13.4 | 11.9 | 13.1 | 13.2 | 12.8 | 14.5 | 16.6 | 12.2 |
| U.S. citizen | 6.4 | 6.4 | 6.3 | 8.6 | 8.6 | 8.6 | 5.5 | 5.6 | 5.4 |
| Not a U.S. citizen | 6.4 | 7.0 | 5.6 | 4.5 | 4.6 | 4.1 | 9.0 | 11.0 | 6.8 |
| **Educational attainment** | | | | | | | | | |
| Total, 25 years and older: | | | | | | | | | |
| Thousands | 9,936 | 6,186 | 3,750 | 4,896 | 3,586 | 1,310 | 103,454 | 53,553 | 49,901 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less than a high school diploma | 10.6 | 12.7 | 7.3 | 4.9 | 5.1 | 4.4 | 9.9 | 11.8 | 7.8 |
| High school graduates, no college | 31.4 | 32.4 | 29.7 | 23.0 | 23.0 | 23.1 | 30.5 | 30.6 | 30.5 |
| Some college, no degree | 18.3 | 17.7 | 19.2 | 18.3 | 17.6 | 20.2 | 17.8 | 17.0 | 18.5 |
| Associate degree | 8.5 | 7.1 | 10.8 | 7.4 | 7.0 | 8.6 | 9.8 | 8.5 | 11.1 |
| College graduates | 31.2 | 30.1 | 33.0 | 46.3 | 47.3 | 43.6 | 32.1 | 32.1 | 32.0 |
| Advanced degree | 12.3 | 12.2 | 12.5 | 17.9 | 18.8 | 15.5 | 10.9 | 11.2 | 10.6 |

Data exclude the incorporated self-employed

Note: Detail for the above race and Hispanic or Latino groups will not sum to total because data for the "other races" group are not presented and Hispanics or Latinos are included in both the white and black populationt groups. Detail for other characteristics may not sum to totals due to rounding. In addition, data exclude unpaid family workers.

***Table 1.*** *Unincorporated self–employed, incorporated self–employed, and wage and salary workers by sex and selected characteristics, 2003 annual average.* CENGAGE LEARNING, GALE.

within groups regarding self-employment that could also be attributed to differential treatment in lending and consumer practices. Among Hispanic groups, Mexican Americans have low levels of self-employment whereas Cuban Americans have rates similar to those of whites. Asian Americans also tend to have higher rates of self-employment compared with other groups. Due to economic opportunity in ethnic enclaves, often resulting from discriminatory treatment in business arenas outside the enclave, some immigrant groups therefore tend to have distinctly higher rates of self-employment compared with the native born (Borjas, 1986). This illustrates how differences in access to economic and social mobility constrain different groups' participation in self-employment.

## THEORETICAL EXPLANATIONS

Which factors have contributed to the existence of self-employment and its resurgence over time? The Marxist (Karl Marx, German economist, 1818–1883) school of thought argues that the self-employed are part of the middle class, or petty bourgeoisie, because they own their

own businesses. Although some contention remains regarding what classifies an individual as petty bourgeois, Marxists argue that due to the tendency of businesses to concentrate into large firms, the middle class will eventually decline and become part of the working class. However, this is problematized by the resurgence in self-employment (Steinmetz and Wright, 1990). This theory has become less salient and useful over time for explaining the persistence of self-employment.

A second theory addressing the existence of the self-employed argues that capitalist economic systems require a healthy sector of self-employed to provide specialized skills and fill market niches not addressed by larger firms. Along with individual explanations such as the desire for upward mobility, larger structural economic factors also influence the rate of self-employment. The shift to a postindustrial economy has encouraged self-employment as a result of technological change, which allows for more decentralization of firms and increased opportunities for individual entrepreneurial ventures.

Technological change and economic decentralization also may explain increased self-employment rates. Some researchers suggest that the shift from a manufacturing to a service-based economy and the marginalization of nonprofessional occupations has encouraged the growth of self-employment. With the decline of the manufacturing sector in the United States and some countries in Western Europe, self-employment may provide a means of avoiding unemployment for displaced workers. Therefore, with an economic downturn or a rise in the unemployment rate, the number of individuals who become self-employed may increase. This is exemplified by the slight increase of workers becoming self-employed, 6.5% to 6.8%, during the sluggish economic period between 2002 and 2004 in the United States (Hipple, 2004).

Another explanation for the rise in self-employment focuses on the role of politics and the state in supporting small business ownership. Government policies have been increasingly directed at fostering self-employment by providing tax incentives and other programs designed to encourage small businesses. Comparing policies in the United States with those in Germany, McManus (2000) argues that the institutional features of labor markets and welfare states have important implications for quality of self-employment. The provision of social insurance and health care to Germany's small business sector provides more stability for the self-employed than in the United States, where social programs are not available to all.

## IMPLICATIONS FOR THE LIFE COURSE

The fate of the self-employed has tremendous significance for understanding economic conditions and their implications for the life course. Most researchers argue that its existence and size serves as a benchmark for measuring the state of the economy. A rise in the levels of self-employment may coincide with an economic downturn as individuals thrown out of work by recession seek other means for earning income. Others seek to understand the relationship of self-employment and earnings inequality. Under capitalist economic systems, it has been argued that the self-employed have the capacity to provide the economy employment for workers, generate new jobs, and stimulate innovation. The job creation potential of this economic sector has major implications for providing economic opportunities to women and immigrants. The self-employed also play an important political role in society through their general support of the capitalist system and democratic institutions. Although much more research is required to fully understand the role played by self-employment, this sector of employment has significant implications in both the short and long-term for the life course of individuals regarding economic and social mobility and for understanding the level of inequality in the larger economy.

**SEE ALSO** Volume 2: *Careers; Economic Restructuring; Employment, Adulthood; Flexible Work Arrangements; Job Characteristics and Job Stress; Marx, Karl; Occupations.*

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# SEXISM/SEX DISCRIMINATION

Sexism and sexual discrimination are two of the primary reasons that gender inequality persists in the United States. The U.S. Equal Employment Opportunity Commission (EEOC) received almost 25,000 "charges of sex-based discrimination" in the 2007 fiscal year alone (EEOC, 2008). Sexism refers to attitudes and beliefs about people based on their sex. Often these prejudices are negative, such as the idea that women are incompetent, but these opinions may also be positive, such as the belief that women are nurturing. Sexual discrimination, in contrast, involves treating people differently based on their sex. For example, this may be the preference to hire men instead of women or to allow more women than men to enter a dance club.

These terms are frequently used to refer to the negative treatment or position of women relative to men. This approach makes sense. Because women are subordinate to men in most parts of the world, they are more likely to be the targets of sexism and sexual discrimination. However, men may be the targets as well. Because members of subordinate groups (e.g., women, gay men, and so forth) tend to be victims of gender bias and members of the dominant group tend to be perpetrators, sexism and sexual discrimination help preserve the system of male privilege and the subordination of women and nondominant masculinities.

If someone discriminates based on another person's gender, does that mean that he or she is sexist? The answer is not necessarily. Sexism and sexual discrimination often go together, but not always. Consider a male employer at an electronics store seeking a new salesperson. This employer may know that there are many women knowledgeable about electronics, but if he fears that his clientele will only buy from a man, then he will be hesitant to hire a woman, regardless of her credentials. His behavior, then, is discriminatory, even though he does not consciously hold sexist beliefs. It is possible that a person can have subconscious attitudes (implicit beliefs), which can influence behavior, even without the person being consciously aware of it (Quillian, 2006).

It is worth noting that sexism and sexual discrimination are actually misnomers. The two concepts technically focus on attitudes and behavior based on someone's sex, but what this concept really refers to is a person's gender rather than his or her sex. Sex is biology; gender relates to the meaning and behavior associated with being a man or a woman (Kimmel, 2008). Some of the most frequently measured forms of sexism are beliefs about how women are supposed to behave. For instance, should a mother work outside the home? Is it a woman's responsibility to care for the home? Can a woman be assertive and still be feminine? These beliefs have nothing to do with a woman's biological sex and everything to do with what it means to be a woman.

But why are some people sexist and why do some people discriminate? The simplest explanation is socialization—that is, the idea that people have been taught that certain behaviors are appropriate for one gender and other behaviors are appropriate for the other gender. (This assumes only two genders, a point that is contested by many gender scholars and intersex advocates; see Kimmel, 2008.) The extent to which one holds sexist attitudes is partly based on age, with people from older generations being more likely to hold "old fashioned" views about women (what is now called sexist) and younger people being likely to hold more egalitarian views. There is evidence for this argument, but the explanation is incomplete.

A related perspective is that people hold views about what is appropriate gendered behavior (i.e., their gender ideology) that agree with how they perceive their own gender (i.e., their gender role identity). This is because disagreement between someone's gender role identity and his or her gender ideology can cause confusion. For instance, if a man believes that masculine men are big and burly but he is small and delicate, does that mean he is not a "real man"? In contrast, agreement between someone's gender role identity and his or her gender ideology is validating. The result is that a masculine man is likely to support behavior that agrees with his ideas of masculinity (such as the male breadwinner role) and is likely to resist behavior that opposes it (such as married women earning an income).

A different set of arguments contend that sexism and sexual discrimination stem from some men's need to protect their position of privilege (Goldin, 2002). This practice may include men protecting their personal status or that of males as a group. Men are in the dominant social position, but not all men are as dominant as others. Masculinity, or manliness, helps determine which men are atop the hierarchy. Because of the privileges that come with appropriate displays of masculinity, some men are concerned that if their masculinity is questioned then they are somehow less of a man. In order to prove their masculinity to themselves and to others, they may denigrate and harass women or less masculine men.

Men as a group are in power; women are not. Sexism and sexual discrimination have been and continue to be used to prevent women from gaining power. From the perspective of those in power, it therefore makes sense to perpetuate gender stereotypes, even when there is overwhelming evidence invalidating those stereotypes. For instance, the common but erroneous stereotype that women are irrational implies that a woman should not

***Sexism in Advertising.*** *Pedestrians walk past large outdoor clothing advertisements.* SPENCER PLATT/GETTY IMAGES.

be a boss, a chief executive officer, or the president. If this stereotype is believed, then these positions are preserved for a man. This logic makes women less attractive as employees and keeps men "first in line" for the most desirable jobs (Reskin, 2001).

The consequences of sexism and sexual discrimination are felt by everyone, if for no other reason than that everyone has women in their lives. More specifically, the effects are seen in labor market inequality, such as the devaluation of the jobs predominantly held by women and the work women do, discriminatory hiring practices and job allocation, and different expectations; discrimination against mothers in hiring and promotion; the disproportionate amount of home, child, and elderly care done by women, along with the failure to either compensate workers for their labor or provide affordable alternatives; the medical field's disregard for women, as evidenced by women's exclusion from medical studies and absence from medical texts; and the disproportionate level of violence suffered by women at the hands of their partners. Biased treatment can also impact women's health, causing them to suffer from such ailments as depression, nausea, and headaches (Welsh, 1999, p. 183).

Although sexism and sexual discrimination impact women in all walks of life, the ramifications may be more severe for women of color and of lower socioeconomic status. These women not only face stigma and discrimination because of their gender but also because of their race and class. Oppression based on these statuses is multiplicative, not additive. This means that a Black woman does not face the same gender oppression as a White woman or the same racial oppression as a Black man. Instead, she faces unique experiences because she is Black *and* a woman. For instance, lower-class women of color, particularly immigrants, often work as domestics (lower-class men tend to hold other jobs), positioning them for exploitation, whereas upper-class women can use their wealth to reallocate their domestic responsibilities to women of lower classes (Amott & Matthaei 1996, p. 15). Young, lower-class Black women have the added stigma of being stereotyped as single mothers. Middle- and upper-class Black workers, in contrast, risk being "isolated" in a "corporate environment . . . that [is] inhospitable and alien" (Browne & Misra 2003, p. 501). Moreover, Black workers, regardless of age and class, must cope with the consequences of a long history of racial bias in the United States. Class and racial status also influence medical care, with lower-class and non-White patients receiving a lower quality of treatment than their wealthy White counterparts.

Sexism and sexual discrimination primarily impact women, but men can be victims too. For instance, current ideals of masculinity reward acts of risk-taking, aggression, and heterosexual sexual prowess while punishing behavior deemed to conflict with them. As a result, some men feel pressured into pursuing dangerous or even criminal behavior in order to prove their manhood. Men may also be harmed by the sexist belief that women and children deserve to be protected from danger first, leading men to be the last saved and the first to die.

A large proportion of the research on sexism and sexual discrimination considered in the United States focuses on what is going on here. It is therefore tempting to want to know how the situation in the United States compares to that in other countries. However, direct comparisons should be undertaken only with the utmost care. Cross-cultural comparisons are complicated by different definitions, data collection standards, and ethnocentrism.

Varying definitions and data collection standards are problematic because they make it difficult to ensure that measures of sexism and sexual discrimination are consistent and comparable across countries. For example, if country A defines discrimination as anything that creates a negative working environment, whereas country B says that the only thing that qualifies as discrimination is pressure from a superior to have sexual relations (Saguy, 2000, p. 1092), then it is meaningless to compare rates of discrimination across the two countries.

A second issue is how to apply one's own perceptions of sexism to other cultures without being too "ethnocentric." A single example should suffice to illustrate this problem. In 2004 France passed a law banning the wearing of conspicuous religious symbols in state schools. Although the law applied to all religious groups, there was a clear understanding that it was enacted to stop Muslim women from wearing headscarves. Two main justifications were given for the law. The first explanation was that headscarves were emblematic of Muslims' refusal to assimilate to secular French society. The second

contention was that headscarves were symbols of Islam's oppression of women. Some Muslim women agreed with this latter assessment, but many did not.

If the headscarf is considered only from a European/North American perspective, one could legitimately argue that it represents Muslim women's subordinate place in Muslim society (if for no other reason than that they are not granted the same freedom in attire as men). But if the decision is considered from the standpoint of many Muslim women, one could possibly see that maybe these women are not oppressed by the tradition. In fact, when asked, some women said that, for them, wearing a headscarf was a personal choice to follow cultural traditions and beliefs about what "was modest and right." This example demonstrates that before attempting to determine if certain cultural behaviors are sexist, it is necessary to have some understanding of that culture.

Even with the caveat that it may be ill-advised to compare sexism and sexual discrimination across cultures, it is clear that the treatment of women varies regionally. Norway, for instance, is known for its progressive policies promoting gender equality, whereas in Saudi Arabia women are forbidden from voting, driving cars, or being in public without a male relation. In many parts of the developing world the situation for women is even worse and is characterized by high rates of female infanticide and sex-selective abortion, poor nutrition, little or no medical care, and low life expectancies for those who survive childhood.

Because sexism and sexual discrimination persists almost everywhere in the world, further research on the subject must continue. Two likely areas of ongoing research are sexual harassment and the intersection of gender, race, and class. The trend of applying paradigms developed outside of gender of research is also likely to continue. Another area that deserves more attention is sexism and sexual discrimination against men. Although men are not the prime targets, to ignore them in favor of women would be both sexist and discriminatory.

**SEE ALSO** Volume 1: *Socialization, Gender;* Volume 2: *Gender in the Workplace; Policy, Employment; Racism/Race Discrimination;* Volume 3: *Ageism/Age Discrimination.*

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# SEXUAL ACTIVITY, ADULTHOOD

People are born sexual and have the capacity for sexual activity throughout the life course. Sexual activity involves the behavioral expression of erotic feelings, typically for pleasurable or reproductive purposes but in some contexts for power and control. Sexuality is influenced by biological, psychological, sociological, and spiritual factors, within historical, cultural, and developmental contexts. Virtually all societies attempt to regulate sexual activity, with varying degrees of success. Individuals are presumed to be most capable of both fulfilling their sexual potential and conforming to social norms in their sexual behaviors when they are adults; thus, sexual activity is viewed as most acceptable for adults of legal age but before they become too old. This does not mean that children and older adults

are not sexual, but it does reveal that sexuality over the life course is socially constructed and socially controlled.

## THE NATURE OF HUMAN SEXUALITY RESEARCH

Sexology is the scientific study of sexuality. Given the private nature of human sexual behavior and the ways that societies attempt to control sexuality through laws and social norms, understanding and investigating the complex nature of human sexual activity requires multiple disciplinary perspectives and many types of research methods. Throughout the 20th century, sexologists sought to change the belief that sexuality was not worthy of serious attention by bringing a positivist scientific approach to the study of sexuality. Sexual science introduced survey and interview methods and laboratory research as a way to bring credibility to the investigation of behaviors, such as masturbation, homosexuality, oral sex, and sexual intercourse for purposes other than reproduction that had been condemned as sinful and deviant.

Alfred Kinsey (1894–1956) was the leading figure in conducting research in which Americans were asked about their actual sexual practices. His samples included 20,000 men and women who were surveyed and interviewed in the 1940s and 1950s (Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953). He demonstrated that people from all walks of life were willing to answer very personal questions about their most intimate behavior, including masturbation, orgasms, sexual intercourse, homosexual behavior, sexual responsiveness, extramarital relationships, and sex with animals. He found that many of the practices previously thought uncommon or perverse were widely practiced by ordinary citizens. His books were instant best-sellers, attesting to the public's keen interest in and desire for sexual knowledge and communication.

Kinsey and his associates also changed the conceptualization of homosexuality. They described sexuality along a continuum, with 0 being exclusively heterosexual, 6 being exclusively homosexual, and 3 being equally heterosexual and homosexual. They reported that 37% of men and 13% of women had experienced at least one sexual experience to orgasm with someone of the same gender and that 4% of men and 3% of women considered themselves lifelong homosexuals. The oft-cited and frequently challenged statistic that 10% of the population is gay came from one of Kinsey's findings, which indicated that 10% of White men had been mostly homosexual for at least 3 years between the ages of 16 to 55 (Carroll, 2007).

William Masters (1915–2001) and Virginia Johnson (b. 1925), a medical doctor and a psychologist, respectively, were among the first modern sexologists to conduct observational studies of people who volunteered to engage in sexual activity in their laboratory. In 1966 they published *Human Sexual Response*, in which they reported on their research with 700 volunteers they had studied engaging in sexual activities. Masters and Johnson measured physiological changes in the heart and of the sexual organs to study orgasmic potential and sexual response. Their research resulted in the four-phase sexual response cycle, consisting of the excitement phase, the plateau phase, the orgasm phase, and the resolution phase. They found that women experienced only one type of orgasm, through the direct or indirect stimulation of the clitoris. This finding was in direct contrast to Sigmund Freud's (1856–1939) theory of the vaginal versus the clitoral orgasm, with the vaginal orgasm characterized as a more mature and thus superior version. Masters and Johnson also found that women are capable of multiple orgasms, whereas males experience a refractory stage following ejaculation. That is, a male cannot be restimulated to orgasm for a certain period of time; the length of time is highly dependent on age, with older males experiencing a longer refractory period.

The National Health and Social Life Survey, conducted by Edward Laumann, John Gagnon, Robert Michael, and Stuart Michaels (1994), attempted to provide a more representative sample and thus improve on and update the Kinsey studies. After the U.S. government pulled its funding from this project due to policy makers' reluctance to fund the work, the researchers were forced to reduce the scope of the study. The final sample was much smaller than originally intended. It consisted of nearly 3,500 respondents between the ages of 18 and 59 and revealed that Americans were more sexually conservative in their behavior than Kinsey had reported. For example, Laumann et al. reported that the median number of sexual partners for men since age 18 was six, and, for women, it was two. They also found a smaller portion of married adults reporting infidelity than had been found in the Kinsey data: Only 25% of married men and 20% of married women reported that they had engaged in extramarital sex, whereas Kinsey's findings were 50% of men and 25% of women. Finally, the study challenged the Kinsey statistic about homosexuality: 2.8% of men and 1.4% of women described themselves as homosexual or bisexual. One possible explanation for the more conservative nature of the Laumann et al. findings is that they used a random sample approach, whereas oversampling of particular kinds of respondents, including those who were Northern, educated, White, and Protestant, among other characteristics, may have occurred in the Kinsey studies.

A study conducted by William Mosher, Anjani Chandra, and Jo Jones (2005), however, reported that the incidence of bisexuality is increasing among young

and middle-age adults, particularly for women. Eleven percent of women between the ages of 25 and 44 reported having had at least one sexual experience with another woman, and about 6.5% of men reported having oral or anal sex with another man. One conclusion from this study is that it is becoming more socially acceptable to openly discuss and experience bisexuality, particularly among recent cohorts of college-educated women.

Richard Parker and John Gagnon (1995) suggested that since 1980, the scientific study of sexuality has been reconceived by postmodern sex researchers. Several trends have greatly altered the way in which human sexual activity can and should be studied. One major trend is the global pandemic of HIV and AIDS and its disproportionate effect on women and children in developing nations. Another trend is the deconstruction of neat categories of heterosexual versus homosexual, which have been challenged by people who are bisexual, gay, and transgendered (i.e., people whose very identities are fluid and change across gender and sexual categories).

Postmodern sex researchers critique the 20th-century sexologists for their use of traditional scientific research methods (e.g., survey, interviews, and laboratory observations) that upheld conservative political values and normalized heterosexual middle-class behaviors. In contrast, postmodern researchers claim that new theories and methods are needed to account for how power and privilege structure sexual activity. Postmodern researchers critique sexology for its attention only to individual sexuality and its lack of attention to social change (Irvine, 2005). For example, when male pleasure is emphasized and privileged, women's expansive capacity for sexual pleasure is ignored; women learn to fake an orgasm, for example, in the service of male pleasure (Jackson & Scott, 2007). A postmodern feminist approach would reinterpret the Masters and Johnson finding of the myth of the vaginal orgasm by exposing how gender, sexuality, and power are intertwined.

## SOCIAL CONTEXTS OF ADULT SEXUAL ACTIVITY

Sexual activity in adulthood involves the variety of individual and relational experiences in which adults engage. People can be asexual and experience no sexual feelings, desires, or behaviors. People can also engage in autoerotic experiences such as fantasy and masturbation. Typically, however, sexual activity is defined relationally, by the partners with whom one engages sexually (Sprecher & Regan, 2000). The most socially acceptable form of adult sexual activity occurs in the context of a marital relationship. In most cultures throughout history, with notable exceptions, a heterosexual partnership is the key way in which people express their sexuality. As noted above, a significant minority of people also engage in homosexual behaviors and relationships, regardless of how they identify their sexual orientation. Finally, people can have sexual experiences with more than one person. These relationships can be open, in which partners in a primary relationship are allowed to have sexual contacts with others (e.g., polyamorist), or closed. Open relationships are sometimes referred to as *swinging*. A relationship in which secret sexual liaisons occur is characterized as infidelity, adultery, or having an affair.

In most European and North American societies, sexual activity is proscribed in the form of a monogamous relationship. Legal heterosexual marriage is the idealized form of this kind of relationship. Since the industrial revolution of the 19th century, marriage has represented a relationship in which feelings of romantic love and sexual behavior are expected to co-occur, though men were seen as the more sexually desirous and demanding gender. In the 20th century, however, marriage became more companionate and egalitarian, with women becoming freer to discover and express their sexuality.

Throughout history, variations have occurred to the socially and legally proscribed form of sexual activity as only occurring in marriage. For example, polygamy (whereby the husband has more than one wife) is common in many countries in the Middle East and parts of Africa (e.g., Iran, Nigeria, and Kenya) and is associated with the Muslim faith. Gender is an important distinction, though, in polygamous marriages. Although a man may have several wives, a woman's sexual behavior is restricted to her one husband, with severe punishments for transgressions. In European and North American societies, male and female infidelity is more acknowledged and tolerated, but a double standard still exists. Women carry the burden for nonmarital sex and suffer damage to their reputations, whereas men's sexual behavior is not as constricted by behavioral norms (Risman & Schwartz, 2003).

## DEVELOPMENTAL CONTEXTS OF ADULT SEXUAL ACTIVITY

By adulthood, most people have experimented with and faced challenges in establishing their sexual identity, orientation, and relational commitments. Sexuality, though, is best conceived of as an emergent process and not one that is settled or achieved by a certain age. The early years of adult life are characterized by initiating and experiencing various forms of sexual intimacy with partners, including dating, courtship, cohabitation, and marriage, as well as establishing one's sexual orientation. About half of the relationships that result in marriage also end in divorce, but most people who divorce also remarry.

Sexual orientation involves a range of feelings, thoughts, and behaviors associated with how people perceive their sexuality. In updating Kinsey's conceptualization, Fritz Klein (1990) described the following seven dimensions: sexual attraction, sexual behavior, sexual fantasies, emotional preference, social preference, self-identification, and lifestyle preference. The dimension of time is also considered in terms of a person's self-categorization in the past, present, and ideally. Thus, sexual orientation is reconceptualized as fluid and changeable over the life course, not a stable or fixed identity resulting merely from self-labeling or sexual behavior.

In addition to issues of sexual pleasure, relational fulfillment, and sexual orientation, there are other serious decisions to be made. Contraceptive and reproductive decisions that affect planned and unplanned pregnancies are central to sexual activity in adulthood. Another key concern is practicing safe sex to avoid sexually transmitted diseases (e.g., bacterial infections such as gonorrhea, syphilis, and chlamydia; viral infections such as herpes and human papillomavirus; and HIV or AIDS). People most likely to avoid making decisions on behalf of their reproductive and sexual health are those in compromised circumstances, including having sex for money, combining sexual activity with alcohol and drug use, having casual and unprotected sex, and experiencing sexual violence (Bowleg, Lucas, & Tschann, 2004).

Although adult sexual activity does not follow a uniform pattern, some research has shown that for married couples, sex is common and prevalent in the early years. Newlyweds report having sex about two to three times per week. The early phases of passion and intimacy in a new relationship can deteriorate over time, however, as the reality of adult life intercedes in the form of multiple and competing role expectations. Sexual activity tapers off when children are being reared and work and family demands compete with sexual desire (Schwartz, 1994). Unless passion is kept alive and rekindled, sexual desire in a committed relationship declines and may disappear altogether, with partners leading separate lives, experiencing infidelity, or divorcing (Schnarch, 1998).

Sexual relationships, then, require attention. This monitoring is especially important as people age and marriage endures. In midlife, menopause changes not only how the female body is capable of sexual response (e.g., vaginal drying), but the loss of hormones can dampen desire. Men also experience decreased desire and the physical changes that accompany aging, such as difficulty in getting and maintaining an erection. The prolonged use of alcohol and drugs also erodes sexual responsiveness and desire. In addition, the physical process of aging, in a society that prizes young, perfect bodies, can lead adults to feel less attractive and desirable as they mature.

Individuals and couples are advised to redefine the nature of sexual intimacy as they age. Sexual intercourse is only one way to express erotic potential. Heterosexual and gay and lesbian couples in established relationships report that deep kissing, hugging, erotic massage, intimate conversations, holding hands, taking showers together, and other established rituals are key parts of their erotic relationships (Sprecher & Regan, 2000). One of the advantages of adult sexual activity in a committed relationship in which couples are able to look each other in the eyes and take the time to fully experience their sensuality is that the culturally prescribed rituals of faking pleasure are no longer necessary (Schnarch, 1998).

Opportunities for partnered sex appear to be one of the biggest issues facing adults. Research also suggests that sexual satisfaction in midlife and beyond is linked to having a partner. Laumann et al. (1994) found that married couples reported higher levels of sexual satisfaction and pleasure than singles or those in extramarital relationships. Individuals who lived alone and those who were unmarried reported the lowest rates of satisfaction.

## THE RANGE OF SEXUAL ACTIVITY IN ADULTHOOD

Human sexual activity involves many ways in which adults act on their feelings and thoughts about sexuality. A large portion of adult sexuality is concerned with the reproductive potential within human beings, but sexuality is also about the pursuit of pleasure. Some individuals experience pleasure in socially accepted ways; others' experiences with sexual pleasure are more variant.

Sexually variant behaviors are characterized as *paraphilias*. They involve a desire for an erotic object that is unusual or different, with *different* being defined according to social and historical standards. For example, until 1973 the American Psychiatric Association defined homosexual behavior as a mental disorder. People who were caught engaging in homosexual behavior or diagnosed as homosexual could be arrested and institutionalized. Some stigma may linger about gay and lesbian people, but the myths of homosexuality as mental illness and social deviance have been debunked.

Paraphilias range from innocuous to harmful, that is, from certain behaviors such as having a fetish, in which no one is hurt, to behaviors such as pedophilia, in which there are criminals and victims. Paraphiliacs can be found in every race, social class, or ethnic group and are prevalent among people of every sexual orientation and intelligence level. The one demographic characteristic paraphiliacs have in common, however, is that they are disproportionately male (Carroll, 2007).

Certain paraphiliac behaviors (e.g., fetishes and cross-dressing) are typically harmless, particularly if they do not interfere with normal functioning and do not

harm another person. Others, such as exhibitionism and voyeurism, are nonconsensual and do involve a victim. Sexual masochism (feeling sexual pleasure from being humiliated or being forced to experience pain) and sexual sadism (feeling sexual pleasure from inflicting humiliation or pain on another) are experienced along a continuum, from dominance and submission sexual narratives and practices that are eroticized in heterosexual and homosexual relationships to very dangerous activities that could involve torture and death. Sadomasochism (S & M) is the ritualized experience of a master–slave relationship; a couple agrees on the dominance and submission script and uses an exit phrase if the role-play becomes too intense. The purpose of the exit phrase is to ensure that no harm comes to the dominated partner.

Pedophilia is an obsessive and predatory paraphilia, illegal in every country but practiced nonetheless. A pedophiliac is an adult who fantasizes or engages in sexual activity with a child under the age of 13. The typical pedophile is at least 5 years older than the victim. The majority of pedophiles (more than 90%) are males. Pedophilia is very difficult to treat or change (Carroll, 2007).

One of the major issues influencing contemporary sexuality is the way in which societies project values about sexual agency and the social control of sexuality. European and North American society projects an ambivalence that both celebrates and condemns sexuality. The mass media helps to construct and exploit human sexuality and its expression in adult intimate relationships. The media is saturated with contradictory messages and images that alternately take advantage of and repress sexuality. Agentic sexuality, whereby individuals are able to make wise choices on behalf of their own desires and express those desires in authentic relationships, is challenged in a society with such competing messages. How these messages are interpreted and sorted out is an issue for parents, educators, policy makers, and citizens alike.

Comprehensive sexuality education throughout the life course is a key remedy to the contradictory ways in which society exploits and represses sexuality. The scientific study of sexuality reveals that human sexuality is an emergent process, and the thirst for sexual knowledge does not end in childhood. Sexuality is primarily a relational experience, and adults grow and change through their sexual encounters with others. It is important for social institutions to provide all citizens access to new knowledge that has been generated from research so they can incorporate this knowledge into their own quests for sexual agency and authentic relationships.

**SEE ALSO** Volume 1: *Sex Education/Abstinence Education;* Volume 2: *Abortion; AIDS; Birth Control; Childbearing; Cohabitation; Dating and Romantic Relationships, Adulthood; Gays and Lesbians, Adulthood; Marriage.*

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# SIBLING RELATIONSHIPS, ADULTHOOD

The families of adults in American and European societies frequently are assumed to consist of parents, children, and spouses; siblings have been relatively invisible. As adult baby boomers' family experiences are studied, however, it has become clear that in that generation, with the largest sibships in the 20th century, sibling relationships are also primary. The stability of the sibling tie is emphasized by the fact that boomers will have fewer children to rely on than did their parents, are less likely to have a spouse because of their high divorce rates, and are less likely to have family members nearby because of their high rates of geographic mobility. Further, the need to provide care for frail elderly parents is becoming the norm; that role often reactivates dormant sibling relationships.

Addressing adult sibling relationships also makes visible certain overlooked aspects of adult life. For instance, because siblings are ''beyond the bonds of partnering and parenting,'' they force researchers to focus on a broader social network (Walker, Allen, & Connidis, 2005, p. 167). Siblings link one another to many other relationships, such as those with nephews, nieces, uncles, aunts, and cousins, as well as the network ties those kin make available to their family members (Matthews, 2005). Because relationships among adult siblings usually transcend household boundaries, they highlight family relationships beyond the household.

Before one can address some of the dimensions of sibling relationships, influences on them, and the consequences of those dimensions for the well-being of the siblings, it is necessary to define the sibling relationship. A sibling is a person's brother or sister. A sibling may have the same parents by birth (biological sibling) or through adoption or share only one parent (half-sibling). Some siblings have different parents: parents who may be married to each other in the case of a stepsibling or parents who may be cohabitating with each other in the case of a quasi-sibling. A sibling may be informally adopted in the case of fictive siblings. Most of what is known about adult siblings concerns biological siblings. More than 80% of adults have a living sibling (*General Social Survey Cumulative Datafile*, 1986). Sibships take into account all of a person's brothers and sisters. Sibships vary by number, gender composition (number of brothers and sisters), and birth order (position of each brother and sister relative to the others). Most research on adult siblings focuses on pairs of siblings rather than the whole sibship.

Most studies of siblings in adulthood use relatively small, nonrepresentative samples, with the exception of a few national samples, such as the National Study of Family and Households and the Netherlands Kinship Panel Study. Therefore, their findings rarely can be generalized.

## DIMENSIONS OF SIBLING RELATIONSHIPS

Despite the early Freudian emphasis on sibling rivalry, adult sibling relationships have many dimensions. Sibling relationships have been rated on specific emotional qualities such as closeness, conflict, separateness, indifference, and ambivalence. The emotional content of the relationship can be described in terms of its intensity (strength) and valence (positive and negative direction), but much of the research on adult siblings has been limited to feelings of closeness and conflict. The relationship also has been rated on the frequencies of behaviors that are engaged in, such as contact, provision of assistance, and companionship. Sometimes qualities and behaviors have been grouped into types of sibling relationships, such as intimate, loyal, and hostile (Gold, 1989). Various influences on the relationship have been studied. How close siblings live to each other and their frequency of contact with one another can be viewed as dimensions of the relationship but also as influences on it because both facilitate or constrain other aspects of the relationship.

## INFLUENCES OF EARLY LIFE-COURSE EXPERIENCES ON ADULT SIBLING RELATIONSHIPS

Adult sibling relationships are shaped by experiences earlier in the life course. For instance, it is known that differential treatment by parents of their children is destructive to the children's sibling relationships. Early differential treatment (parental ''favoritism'') also has a negative impact on the relationship in adulthood. Young adults whose parents showed different levels of affection toward them were more jealous of their siblings than were those whose parents were perceived to be equal in their affection (Rauer & Volling, 2007). Similar results apply to middle-age adults. In a study of more than 1,000 German men and women ages 40 to 54, the individuals who reported the best sibling experiences also reported that they and their siblings had been treated equally in childhood. The quality of the adult sibling relationship diminished both with increasing favoritism and with ''disfavoritism'' (Boll, Ferring, & Filipp, 2003).

Another example of the influence of earlier experiences on the adult relationship concerns the rarely studied tie between siblings with different sexual orientations. In one exploratory study, women ages 19 to 74 discussed influences on their feelings of closeness with their siblings. Lesbian women could trace their positive

relationships with their straight sisters to having received support from them when faced with parental disapproval after coming out (Mize, Turell, & Meier, 2004).

The death of a parent during a person's childhood also influences adult sibling relationships. Comparing the results of the death of a mother, father, both, and no death in childhood, Kristin Mack (2004) found that the death of parents results in more closeness but not more contact than in intact families. Maternal death in childhood results in less contact between adult siblings than does paternal death, most likely because mothers are typically the family "kinkeepers" who keep family members in contact with one another. The effect of parental death during adulthood is more varied: It draws some siblings closer together, whereas some become more distant.

## INFLUENCES OF SOCIAL CONTEXTS ON ADULT SIBLING RELATIONSHIPS

Sibling relationships are shaped by social contexts, both proximate (e.g., family, peer, and friendship groups) and distal (e.g., work organizations, historical setting, demographic conditions, and culture). For instance, in American and European societies the adult sibling tie is considered voluntary at the same time that demands are placed on it: Siblings are expected to be involved in one another's lives, be friends, and feel a sense of family commitment without asking too much of one another (Connidis, 2005). These conflicting expectations can generate feelings of ambivalence toward siblings.

Research on geographic proximity has shown that ethnicity, immigrant status, and education influence how close siblings live to each other, which in general declines through age 50 and then stabilizes. Individuals with more education and recent immigrants are more likely to increase their geographic distance from siblings over the life course. African Americans and people from large families are more likely to remain geographically close to siblings. Marital dissolution also increases geographic closeness to siblings. Contact with siblings follows the same pattern as geographic closeness with one modification: Women and Latinos also increase contact over the life course (White, 2001).

A large body of literature has examined exchanges of support and help between siblings. Shelley Eriksen and Naomi Gerstel (2002) found that race has little effect on the assistance and support siblings provide one another. Instead, gender, age, and social class influence the likelihood of providing care to siblings. Having a living parent also promotes sibling help. Marieke Voorpostel and Rosemary Blieszner (2008) found that when parents provide more emotional support, siblings exchange more practical and emotional support with one another. More practical support from parents, however, is related only to exchanges of more practical support between the siblings. Siblings also compensate for parents' lack of support when they have poor relationships with their parents. In this case siblings exchange more support with one another than they do when the relationship with parents is better.

Some influences on sibling relationships are the parent and marital status of siblings and the structure of the sibling group (birth order, number of siblings, gender composition), but their effects are observed mostly in early adulthood. In terms of birth order, older siblings are more supportive of their younger siblings than the reverse (Voorpostel, van der Lippe, Dykstra, & Flap, 2007), but this birth order effect disappears by middle adulthood (Connidis, 2005). Also, members of larger sibships exchange more affection, contact, and support within the sibship than do members of smaller sibships (White, 2001). Further, in young adulthood childless adults provide help to their siblings who have children. In regard to advice, in young adulthood it is siblings with children who share more, whereas childless sibling dyads are more likely to give advice later. Whether siblings have spouses or partners does not influence their exchange of support in Holland; it does in the United States, but in complex ways. Among siblings with different levels of education, those with lower levels of education show more interest in their more highly educated siblings than the reverse (Voorpostel et al., 2007).

Exchanges of help among siblings also depend on the type of help required, the gender and age of the siblings, and other characteristics of the sibling relationship. Voorpostel and Blieszner (2008) found that siblings exchange both practical and emotional support when the relationship is more positive and when there is more frequent contact. Voorpostel et al. (2007) found that sister–sister pairs are more likely to help with housework, give advice, and show interest in their siblings than are other gender combinations, but after age 36 those gender distinctions are less apparent.

Although Dutch men exchange practical support with siblings more than Dutch women do, women are more likely to exchange emotional support, but only with their sisters. Further, sibling relationship quality and contact are frequently more important for support among sisters than among brothers (Voorpostel & Blieszner, 2008), suggesting that whether brothers help one another appears to be independent of the relationship context. This seeming contextual detachment of support between brothers may illustrate a profound difference between female and male expressions of closeness (Matthews, 2005). Men may mask their care behaviors

intentionally to protect their brothers from breaking the normative "rules" of masculinity, in which men are expected to be strong and independent. Thus, in stories about brothers, men appeared insensitive to brothers who sought support because they asserted a controlling style, particularly when it came to practical support (Bedford & Avioli, 2006). This seeming insensitivity may be an act of caring in itself (Swain, 1989). Little research has been devoted to brothers.

## SIBLING INFLUENCES ON PERSONAL DEVELOPMENT

The sibling relationship in both childhood and adulthood influences adult development and well-being. In a prospective study of young non-Hispanic White American men that continued until the individuals were in their 50s, men who had a poor sibling relationship in childhood were more than three times as likely to develop major depression by age 50 than were men with better sibling relationships. This effect was independent of a family history of depression and the quality of relationships with parents (Waldinger, Vaillant, & Orav, 2007).

Siblings also may benefit one another as attachment figures (close others who provide solace in times of stress). Caroline Tancredy and R. Chris Fraley (2006) found that both twin pairs and nontwin pairs met the attachment criteria in young adulthood, although twins were more likely to do so. Also, the same factors contributed to becoming attachment figures among twins and nontwins, such as having spent time together as children and having shared interests, personal lives, or professional lives as adults.

Another sibling effect on well-being in adulthood derives from sharing in parent care. Attempts by individuals to correct sibling inequities in their care of parents resulted in distress to the primary caregiving sibling (Eriksen & Gerstel, 2002). Parent care also can offer opportunities for personal growth by forcing siblings to confront interpersonal issues that may have been avoided earlier through distancing. Sibling conflict in other contexts also offers opportunities for personal growth. Because the sibling tie cannot be dissolved, when faced with high levels of conflict, siblings have to develop strategies for regulating their own as well as another's emotions, including maladaptive expressions of anger and aggression (Bedford & Volling, 2004). In another study the most frequently named benefit stemming from conflicts in adults' sibling relationships was helping one's children and grandchildren manage their own sibling relationships, followed by gains in social competence and gains in one's self-understanding (knowing one's emotional limitations and talents and career choices; Bedford, Volling, & Avioli, 2000).

Siblings also contribute indirectly to the well-being of adults' romantic relationships. Amy Rauer and Brenda Volling (2007) found that young adults who were treated differently by their parents experienced distress in romantic relationships. They found that those adults' models of attachment contained representations of the self and the object of attachment that were more negative than were those of adults who received equal levels of affection from their parents.

## FUTURE DIRECTIONS

These research findings illustrate that the life course provides a meaningful framework for viewing sibling relationships. Spanning the whole of life, this relationship demonstrates the continuing interdependence of siblings as they move into and out of one another's inner circles; it also demonstrates how the changing social network of each sibling influences characteristics of the sibling relationship. Timing of events also may have an effect; early influences on the adult relationship, such as the death of a parent, differ when the event occurs later in life. The findings of research underscore the growing realization of the importance of siblings as both actual and potential sources of support in adulthood. In particular, siblings were seen to offer compensatory support in the absence of parental, spousal, or other resources as well as to make unique contributions.

In light of the growing importance of this relationship in later life, future research should focus on ways to maximize its support potential, such as by identifying potential socialization and intervention processes throughout the life course. For instance, it would be instructive to compare sibling support outcomes during various life transitions among different cultures as well as across different sibling constellations. Future research also should target all siblings, not only biological ones.

**SEE ALSO** Volume 1: *Sibling Relationships, Childhood and Adolescence;* Volume 2: *Friendship, Adulthood; Parent–Child Relationships, Adulthood; Social Networks; Social Support, Adulthood;* Volume 3: *Sibling Relationships, Later Life.*

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***Victoria Hilkevitch Bedford***

# SIMMEL, GEORG

***1858–1918***

Georg Simmel was born on March 1 in Berlin and died on September 28 in Strassburg, Germany (now Strasbourg, France). Trained as a philosopher, he also belonged to the first generation of German sociologists. After receiving a doctorate in philosophy at the University of Berlin (now Humboldt University) in 1881, he became a lecturer at that university in sociology, philosophy, ethics, art, and psychology. Not only were his lectures popular in the university, they attracted the intellectual elite of Berlin as well as many students from abroad.

Simmel was a founding member of the German Sociological Society, along with German sociologists such as Max Weber and Ferdinand Tönnies. By 1900 Simmel's work was well known throughout Europe, Russia, and the Americas, but his repeated attempts to gain a formal university position were unsuccessful. In 1901 he was granted an honorary position that placed him above the rank of lecturer but left him out of the mainstream affairs of the university. His Jewish heritage (despite his family's Protestant conversion) and especially his popularity outside of academia made him appear dubious to many of his colleagues and did not help to secure him a formal position early in his career. In 1914, only four years before his death, he became a full professor at the University of Strassburg.

## CONTRIBUTIONS TO LIFE COURSE RESEARCH

In contrast to some other sociological approaches, Simmel viewed society as neither an organism nor a convenient label for something that does not exist. Instead, Simmel pictured society as a web of reciprocal interactions (*Wechselwirkung*) among individuals and sometimes between people and the material world. Simmel's core notion of *Wechselwirkung* can be translated as both "reciprocal interaction" and "reciprocal effect and causation." To Simmel all social life consists of reciprocal interaction so that the actions and destinies of each element have an impact on the other elements. That notion allowed him to perceive that the modern individual has a strained relationship between what he called objective culture and subjective culture. Simmel saw the modern concept of individualization—the idea that individual people can and should have power and agency—as a part of subjective culture, but he was aware that the world outside the individual may develop its own dynamics (objective culture). Objective culture can have negative as well as positive unintended consequences for

***Georg Simmel.***

the life course of the individual. This perspective is echoed in the emphasis in contemporary life course research on the tension between human agency and social structure.

From that perspective Simmel defined the subject of sociology not as the study of society, community, or even groups but as the study of the modes or forms of sociation or, more literally, societalization (*Vergesellschaftung*), by which he meant the ways in which humans associate with one another and become interdependent. Throughout his work Simmel considered social actions not in themselves but in relation to particular structures and processes. For him sociology is the science that studies the processes of societalization.

That definition of sociology was a response to critiques from the historical sciences as well as from psychology that a science of society never would be established because it would fail to have a field of study of its own. To Simmel a sociologist's object of study should not be an entity called society but the intricate connections that give rise to society. As a result of his interest in the forms of association by which a mere sum of separate individuals undergoes the process of societalization to become something greater than that sum, Simmel was especially interested in the issue of individualization. He also considered historical change in individuals' group affiliations and in the life course stages of individuals' group affiliations. For instance, Simmel often discussed the impact of modern technologies, which in his view allow individuals to master their everyday tasks and help design novel forms of societalization in which individuals can pursue their goals and interests. He exemplified the pressure of objective culture when he discussed how modern technologies such as the telephone and new forms of transportation can become means in what he called the process of superordination and subordination. Essentially, he argued that technologies can end up controlling individuals. Subordination by objective culture in the form of a principle or a technological device can be seen as more disturbing than subordination to a group. To Simmel, subordination to a certain group still allowed a person to develop some form of individuality and express beneficial social bonds.

### SIGNIFICANCE OF SIMMEL'S WORK BEYOND LIFE COURSE RESEARCH

In addition to Simmel's contributions to understanding the modern life course and its implications, his work has remained relevant in many other areas in the social sciences. Simmel has been influential in the development of sociology, anthropology, and cultural studies. His ideas on individualization and reciprocal interaction have been critical to the contemporary understanding of modern life in big cities, the phenomenon of strangeness in debates on assimilation, personal and social interaction, modern sexuality, studies of social conflict, exchange theory, and qualitative data analysis in the social sciences.

**SEE ALSO** Volume 1: *Agency;* Volume 2: *Sociological Theories.*

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***Matthias Gross***

## SINGLEHOOD

**SEE** Volume 3: *Singlehood.*

# SOCIAL CLASS

Most societies employ some system of hierarchical ranking, whether explicit or implicit, to make distinctions among their members. In stratified societies, individuals who occupy similar positions in the hierarchy are considered members of the same social class. Although the determinants of social class vary across societies, most modern societies base their rankings on some combination of occupation, education, income, and wealth. In addition to possessing greater financial resources, occupants of higher social classes tend to have greater access to power and authority, better living and working conditions, and better physical and mental health. Those who occupy higher-class positions in a given society typically distinguish themselves by adopting particular dialects, dress codes, leisure activities, manners, and other behaviors and traits that both signify and further their prestige. These behaviors and traits are cultivated to contrast with those of the lower classes, which are considered less culturally refined and therefore less desirable (Bourdieu, 1984).

The social class an individual belongs to typically has a great deal of influence on the shape and structure of his or her life course. As Max Weber's (1864–1920) concept of *life chances* implies, class plays a significant role in expanding or limiting access to a wide variety of experiences, goods, and conditions (Weber, 1946). This influence may be direct, such as when limited financial resources constrain an individual's ability to acquire goods or services that could improve quality of life (e.g., health care, legal services, higher education). Similarly, occupations at the higher end of the social hierarchy differ from those at the lower end in that they often offer greater stability of work and greater opportunities for promotion, as well as greater income.

However, the effect of social class on the life course can also be seen in much more subtle and insidious ways. Position in the social structure affects the very ways that people perceive the world, including the values that they emphasize, the opportunities that they encounter or consider feasible, and even the characteristics that they seek to instill in their children. For example, parents of lower-class children have been found to emphasize behaviors, such as obedience and good manners, that reflect the conformity required by their own class positions, whereas middle-class parents are more likely to emphasize self-direction (Kohn & Schooler, 1983). These traits are encouraged in children because they are likely to enable professional success in their respective milieus: Children who become factory workers will be rewarded for following rules, whereas children who become white-collar workers will be rewarded for innovation.

Social class is associated with a variety of outcomes across the life course. For instance, middle-class students often have better educational outcomes than do lower-class students. As Lareau (2003) has shown, this is not only because they have access to greater financial resources but also because they and their families have greater familiarity with the values, language, and culture of educational institutions; consequently, they are more likely to feel as if they *belong* in school (Ostrove & Long, 2007). Even seemingly personal decisions such as those involving marriage and child-bearing are associated with social class. Lower-class women are less likely than their middle-class counterparts to marry, a social fact that at least partly reflects the poor employment prospects of lower-class men in the modern economy (Edin & Kefalas, 2004). Lower-class women are thus more likely than middle-class women to have children out of wedlock; they are also, on average, younger than middle-class women when they become mothers. Indeed, middle-class women in industrialized societies are postponing motherhood longer than they have since at least World War II; they are also having fewer children (Hall, 1999).

Evidence is particularly compelling about the effect of social class on health throughout the life course. As Henry (2001) has noted, social class contributes to health inequalities in a variety of ways, including psychological mechanisms (e.g., cultural norms and habits, dispositions and cognitive styles, health knowledge); behavioral constraints (e.g., economic resources, barriers to access); and physical influences (e.g., environmental conditions, physiological stress, genetics). Further, the complex interactions of these mechanisms do not result in a simple difference between rich and poor. Instead, socioeconomic differences in health are gradational: The highest income group is healthier than the second-highest income group and so on (Marmot, 1999). A considerable amount of policy work has been devoted to finding ways to reduce inequalities in both the health outcomes and the health care experienced by members of different social classes.

## DEFINING AND STUDYING SOCIAL CLASS

Despite the importance of class to the organization of social life, no single definition of the term exists. Instead, social class has a number of distinct meanings. In everyday usage, it most closely approximates the idea of social prestige, as indicated by lifestyle and consumption patterns. Researchers, however, may use the term to signify one of three meanings. First, class may be used to describe a system of structured inequality, particularly with respect to economic and power resources. Second, class may mean an actual or potential social and political force, with the power to produce significant social change. Third, similar to the everyday usage of the term, class may be relatively synonymous with prestige, status,

culture, or lifestyles (Crompton, 1998). These multiple meanings can be traced back to those developed by Karl Marx (1818–1883) and Max Weber, whose works spawned the theoretical traditions that have been most important to the contemporary study of social class.

Social stratification, the systems of hierarchical ranking employed by societies, has long been a focal point of discussion and debate among intellectuals and philosophers. However, Karl Marx and his literary collaborator, Friedrich Engels (1820–1895), were the first to describe the motivating forces of the new social order that developed in the wake of the industrial revolution of the mid-19th century. Their work emphasized the social relations inherent to industrial production and linked these relations to the dynamics of social change (Rothman, 1999). Marx argued that each period of history was defined by two social classes that were in opposition to each other because of their different relationships to the *means of production* (the tools, equipment, materials, and infrastructure necessary to make products). In feudalistic societies, for example, the two classes were landowners and serfs; in slavery, they were masters and slaves. Under capitalism, the two classes are the *bourgeois*, those who own the economic resources, or capital, and the *proletariat*, workers who own nothing and thus can only survive by selling their labor. The dominant class in any period occupies an extremely advantageous position, which it both maintains and furthers by organizing the *ideological superstructure* (a society's laws, institutions, beliefs, art, values, and so on) to support the status quo.

Despite the considerable disadvantage of the proletariat under capitalism, Marx believed that it would eventually overthrow the capitalist system. To engage in revolution, however, members of the proletariat must recognize their collective predicament. To do so, Marx believed that the proletariat must move from being simply a *Klasse an sich* (a class unto itself) to a *Klasse fur sich* (a class for itself), in which its members are not only aware of the interests they share by virtue of their common location within the economic system but are self-consciously acting together to realize those interests. Marx believed that collective action by the proletariat would overthrow the bourgeoisie, resulting first in a temporary, transitional period of socialism and then settling into a permanent state of communism, in which the distribution of goods would be determined by each individual's abilities and needs.

Although class is obviously central to the Marxist conception of history and society, it is not defined clearly in Marx's writings. Wright (1985, pp. 26–38) argued that Marx referenced class in two distinct ways: structurally, as in the relationship to the means of production (i.e., ownership versus lack of ownership), and relationally, in that classes are defined by their opposing interests and antagonistic relationship. The two-class framework developed by Marx has also been criticized by some because it has been largely unable to account for the marked rise of the middle class(es) during the 20th century. How to incorporate this segment of society, as well as how to account for other developments in modern capitalism, has created considerable debate among neo-Marxist scholars. However, Marx and Engels' work spawned extensive analysis of industrial society, and all scholars of class analysis are thus indebted to them. They introduced many of the key issues on which the study of class and stratification has been based, particularly the concept of class as based on position in a specific productive system and the concept of class-consciousness.

Weber drew on Marx's work to develop a multidimensional view of stratification that extended beyond the Marxist emphasis on class relationships alone. Like Marx, Weber viewed social classes as groups of individuals who share a common market situation that significantly influences their life chances. However, he saw three types of market situation: the labor market, which divides individuals into employers and employees; the money market, which distinguishes debtors from creditors; and the commodity market, which distinguishes buyers from sellers. Participation in more than one market can result in simultaneous membership in more than one economic class. Further, Weber recognized that people without property had a range of skills and abilities that can significantly affect their social standing and life chances. In this way, his work allows more room for the incorporation of the middle classes than does the Marxist tradition.

Weber argued that there are actually three forms of social inequality under capitalism: economic inequality, status inequality, and power inequality. Status inequality is conceptually distinct from economic inequality but is often correlated with it, inasmuch as individuals and groups with the most economic resources often enjoy the highest status. What he termed *status honor*, but which is now typically called social status or prestige, reflected and was based on social values and ideals. Communities of people sharing a similar location in the status hierarchy comprise status groups; their commonalities are grounded in consumption patterns and lifestyles, as well as aspects such as ancestry, ethnicity, education, or occupation. Because status groups are aware of their commonalities to at least some degree, higher-ranked status groups develop exclusionary rules and practices to protect their position and maintain their privilege over time. Weber was less explicit about the nature and dynamics of power inequality. However, his identification of this third type of inequality as distinct from (if often overlapping with) economic and status inequality was significant and further contributed to his multidimensional model of social stratification.

***Blue-collar.*** *Assembly line workers install wheel well liners in the Ford F-150 at the Dearborn Truck Plant in Dearborn, MI. Manual laborers are often referred to as "blue-collar" workers.* AP IMAGES.

In contemporary social science, analysis of social class has typically assumed one of four forms: (a) the study of the emergence and perpetuation of (dis)advantaged groups within a society, with a focus on understanding and explaining a particular class; (b) the study of the consequences of class location, with a focus on understanding and explaining other phenomena (e.g., voting behavior) by examining the impact of social class; (c) the study of the development of class and status cultures and identities; and (d) the largely theoretical discussion of the significance of class processes, particularly with regard to their role in social change (Crompton, 1998, pp. 203–205). A large literature on social mobility has also emerged that examines the movement of individuals up and down the social class hierarchy, both across generations (intergenerationally) and within a single individual's lifetime (intragenerationally).

## THE CLASS STRUCTURE OF POSTINDUSTRIAL SOCIETIES

In some societies, little room is available for subjective interpretation about what constitutes a higher or lower social ranking. For example, the Hindu caste system in India is based on a division of labor and has informed the structure of Indian society for centuries. The caste system has historically determined the social interactions that members can have as well as the occupations they can pursue, although there has been some decline in the rigidity of observance in the modern business environment. However, in societies such as the United States where class divisions are not formalized, ideas about the precise location of class boundaries may vary.

Most models of contemporary stratified societies contain at least three classes: an upper class, a middle class, and a lower class. It is generally agreed that the most powerful and wealthy members of a society comprise the upper class, whereas those who have little to no power and property comprise the lower class. The middle class falls somewhere in between, consisting of those who may or may not exert power over others but who have at least some control over their own destinies through occupation, education, or property ownership. However, both the boundaries and the meaning of these social classes are subject to considerable debate. This is particularly so in societies with great economic, social, and cultural

complexity where there are few easily observable breaks in socioeconomic strata, such as the postindustrial United States (Eichar, 1989). Consequently, although most scholars of social class employ somewhat congruent theories, agreement on the proper operationalization of class remains elusive. For instance, some scholars conceptualize class as being primarily defined by relationships to power (e.g., Zweig, 2000), whereas others emphasize sources of income (e.g., Gilbert, 2002) or consumption patterns (e.g., Lury, 1997). This operational imprecision is also reflected in public opinion data. For example, polls have repeatedly shown that 90% or more of residents in the United States believe themselves to be somewhere in the middle of the class hierarchy (see, e.g., Baker, 2003; CBS News, 2007).

Most analysts of the modern U.S. class system divide it into a somewhat more complicated hierarchy, with each of the three main classes further divided into subclasses. The upper class, also sometimes referred to as the capitalist class (Gilbert, 2002), is in various models further subdivided into the super-rich and the rich (Beeghley, 2005) or the upper-upper and the lower-upper (Warner, Mecker, & Eells, 1960), or divided by the provenance of the wealth (i.e., those who were born into wealth, or old money, vs. those who became rich in their own lifetimes, or new money). The middle class is also often divided into two or three subclasses. These subclasses, which are organized roughly by individuals' educational attainment and the degree of autonomy they enjoy in the workplace, include the upper-middle, sometimes also called the professional class (Ehrenreich, 1989), and the lower-middle. Similarly, the lower class is also sometimes further divided, with scholars such as Coleman and Rainwater (1978) making distinctions between the *semipoor*, or unskilled labor and service workers with some high school education, and the bottom, those who are often unemployed and reliant on welfare. Many class analysts also include a fourth major class, the working class, which is located between the middle and the lower classes. This class, which is also sometimes called the upper-lower class (Warner et al., 1960), is typically made up of manual or blue-collar laborers who did not attend college. Some scholars also include workers in predominantly female clerical positions, or *pink-collar* workers, in this class.

As the multiplicity of these models suggests, a great deal of contention remains regarding which typology best captures postindustrial class structure. A similar lack of consensus exists surrounding the question of whether the unit of analysis for social class should be the individual or the family. For example, should a wife be accorded the same status as her husband if she does not work outside the home, or if her own class characteristics (e.g., education, manners) are different from her husband's? Similarly, should minor children be considered lower class, given their lack of power both within and beyond the family home?

Including women in class analysis has posed a significant challenge to social scientists since the 1970s. Prior to that, class analysis and social stratification in the United States and Europe was devoted almost entirely to studies of men (Sørensen, 1994). Women were considered peripheral to the main concerns of stratification theory because of their intermittent employment patterns outside the home and thus were classified according to the characteristics, particularly the occupational status, of their husbands. This conventional approach to class analysis took for granted that the family should be the appropriate unit for class analysis. However, married women's increasing involvement in the labor force led to criticism of the conventional approach's method of determining family class position, as well as its assumption that all members of a given family occupy the same position in the social structure (Acker, 1973). In what became known as the feminist critique of class analysis, some scholars argued for an individualistic model of class analysis in which the class positions of both men and women were determined individually, regardless of their marital status. Instead of conceptualizing the family as the unit of class analysis, then, this approach emphasized the class position of individuals. Although the issue of how the social scientific literatures on social class and stratification should incorporate women remains unresolved, the considerable debate it has generated has contributed to the development of a substantial literature on women's occupational mobility and disadvantage in the labor market, as well as on the status inequality that women may experience within the household.

In the last decades of the 20th century, some scholars began to argue that social class is of decreasing importance in shaping identity. These arguments reflect changes in the structure of work in modern industrial societies, including the decline in workers employed in traditional blue-collar industries such as heavy manufacturing, and the growth of jobs in the service economy (i.e., nonmanual workers in finance and retail services). These scholars argue that this upheaval in traditional class markers (e.g., clear distinctions in the status of white- and blue-collar work) as well as the individualization encouraged by increasing social fragmentation and an unstable labor market, mean that factors other than employment are becoming more relevant as sources of identity and social cleavage. However, other scholars strongly reject such arguments, asserting that social class remains both a salient source of identity and a highly relevant social force.

**SEE ALSO** Volume 1: *Cultural Capital;* Volume 2: *Educational Attainment; Ethnic and Racial Identity; Income Inequality; Marx, Karl; Occupations; Poverty, Adulthood; Social Mobility;* Volume 3: *Wealth.*

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***Karen Albright***

# SOCIAL EXCLUSION

**SEE** Volume 2: *Social Integration/Isolation, Adulthood.*

# SOCIAL INTEGRATION/ ISOLATION, ADULTHOOD

Social integration refers to the degree to which an individual is tied to other individuals, organizations and groups, and his or her community. These ties may be formal or informal. They may be objective (i.e., based on actual relationships) or subjective (i.e., based on individuals' perceptions of relationships). People who are not socially integrated often are referred to as socially isolated. Social integration both reflects and shapes the adult life course; social bonds emerge from the events and circumstances of people's lives, and those bonds affect people's lives because of the resources they bring.

## EARLY INTEREST IN SOCIAL INTEGRATION

The concept of social integration emerged from the work of the sociologists Ferdinand Tönnies (1855–1936) and Emile Durkheim (1858–1917), who were interested in the ways societies change as they progress from rural to urban. Tönnies used the term *Gemeinschaft* ("intimate community") to describe social integration in rural villages where people are closely tied by kinship and tradition and can be considered members of a single social group. In a Gemeinschaft, relationships are intimate and cooperative and individuals' interactions are guided by the interests of the group. As societies industrialize and urbanize, Tönnies argued, *Gesselschaft* ("impersonal association") emerges and weakens the integrated fabric of family and community. In a Gesselschaft, social bonds and long-lasting social relations are lacking and individuals' interactions are based on self-interest and material accumulation.

For Durkheim persons in both urban and rural areas have social bonds, but those bonds differ. Both types of

society have a collective conscience, a system of fundamental beliefs that tie people together and foster social integration. Rural communities are tied together by mechanical solidarity, that is, social bonds and integration based on common sentiments and tasks and shared moral values. Adults in rural societies have a deep and personal involvement with the community and with one another because they perform similar tasks. By contrast, urban communities, which are shaped by industrialization, are based on organic solidarity, in which individuals perform specialized tasks and rely on one another to perform those tasks. Social relationships thus are more formal and functionally determined in urban societies, but those societies still are socially integrated.

In his influential work *Suicide* (1951 [1897]), Durkheim examined the impact of social integration on individual well-being. He argued that geographic variation in suicide rates (high rates in some countries and low rates in others) are due to different levels of social integration and regulation. Insufficient levels of social integration lead to a high degree of individualism, and the consequent isolation results in higher rates of suicide. Durkheim also argued that excessive levels of social integration also lead to higher rates of suicide because individuals who are very highly integrated feel overwhelmed by the demands and regulations of society. However, this idea is largely unfounded because modern societies rarely have excessive levels of social integration (Johnson, 1965).

In a classic study Mark Granovetter (1973) examined the qualitative nature of social integration, emphasizing the importance of weak ties (acquaintances). Strong ties form among people as a result of long-term, frequent, and sustained interactions; by contrast, weak ties result from infrequent and more casual interaction. Granovetter argued that weak ties are more efficient for innovation and knowledge; strong ties include individuals so embedded in interaction that change is hard to come by. If two people have a strong tie, they are also likely to be strongly tied to all the members of each other's networks, and that creates high levels of overlap in their social integration. Weak ties, in contrast, are the building blocks and bridges for social integration between groups.

## DEFINING AND MEASURING SOCIAL INTEGRATION

Researchers draw a general distinction between structural (objective) integration and perceived (subjective) integration (Moen, Dempster-McClain, & Williams, 1989). Structural social integration refers to an individual's concrete involvement with other individuals, such as friendships, and with social groups, such as clubs and churches. Perceived integration reflects people's feelings about the depth of their connectedness to others, such as the sense of belonging. Another distinction is the social context in which integration occurs. N. Lin (1986) classified social integration as occurring at the community level, within social networks, and through intimate and confiding relationships. Another way of conceptualizing social integration is to think about variation across diverse social contexts. Some of the more common contexts are family, friendships, voluntary groups, civic organizations, the workplace, the local neighborhood, and the larger community. It is important to distinguish among these different types of integration because adults may draw on specific resources for different situational needs (Messeri, Silverstein, & Litwak, 1993).

A counterpart to social integration is social isolation, which refers to a lack of social ties, companionship, and connectedness. Like social integration, social isolation may be structural or perceived. Perceived social isolation sometimes is referred to as loneliness (Ernst & Cacioppo, 1999). Using survey information from 1985 and 2004 General Social Survey (GSS) data, M. McPherson, L. Smith-Lovin, and M. E. Brashears (2006) found that social isolation in the United States increased over that two-decade period. For example, the number of adults who said that they had "no one" with whom to discuss important matters nearly tripled. The connection between age and loneliness is contradictory. Some researchers find that loneliness is most intense during adolescence and young adulthood and then declines with age (Rokach, 2000). McPherson and associates (2006), however, found that a person's network size decreases with age; the older people are, the more likely they are to report that they have no discussion partners in their social network.

Research on social integration is confronted by a number of conceptual and measurement issues. First, the field lacks agreed-on measures of social integration; that means that researchers use a wide variety of measures, making comparisons across studies and data sources difficult. Second, this lack of precision in measurement reflects an underlying lack of conceptual precision. The term *social integration* is not used or accepted universally, and the following terms may be used interchangeably: social integration, social support, social networks, social capital, social isolation, social alienation, social ties, social relationships, social attachment, social disorganization, and social engagement. However, many of these terms, in particular *social support* and *social networks*, refer to specific concepts that although closely related to social integration, are distinct from it. This conceptual imprecision arises in part because research about social integration is carried out in several academic disciplines and because within disciplines, different researchers study different aspects of social ties.

A third issue in defining and measuring social integration is that the concept applies to individuals as well as social groups; for individuals, integration may be structural

or perceived. Thus, social integration may refer to a structural characteristic of an adult such as social support (House, Umberson, & Landis, 1988), a psychological characteristic of an adult such as social attachment (Kasarda & Janowitz, 1974), a structural characteristic of a small group such as social networks, or a structural characteristic of a geographic space such as social disorganization (Faris, 1955). A fourth issue is that similar concepts often are used to measure levels of integration; for example, higher levels of social ties indicate higher levels of social integration (Pescosolido & Georgianna, 1989).

Further development and refinement of the related concept of social capital eventually may rectify some of this conceptual confusion. The idea of social capital entered popular culture with the publication of *Bowling Alone: The Collapse and Revival of American Community* in 2000 by the political scientist Robert D. Putnam. Putnam argued that traditional forms of social integration—interpersonal ties, voluntary organizations, and civic participation—have had massive declines in involvement. Putnam made a distinction between two types of social capital: Bonding involves integration with individuals who have similar characteristics, whereas bridging involves integration with individuals who have diverse and often dissimilar characteristics. Putnam's work on social capital has been criticized and is not accepted universally in the academic community (Fischer, 2005).

The origin of the term *social capital* is debated (Portes, 1988). Although there is no universal definition of social capital—certainly a limitation of the concept—A. Portes (1988) provided a general definition that is accepted widely: Social capital is the ability of individuals to access and use resources and benefits as a result of their integration in social networks and social structures. Social capital is an extremely popular concept and is used extensively throughout the social sciences: The preface to a widely read edited volume on social capital states that "[s]ocial capital as both a concept and theory has drawn much intellectual interest and research in the past two decades. The attraction of the notion is perhaps in part due to the common understanding that as a social element it may capture the essence of many sociological concepts (e.g., social support, social integration, social cohesion, and even norms and values) and serve as an umbrella term that can be easily understood and transported across many disciplines" (Lin, Cook, & Burt, 2001, p. vii).

## CAUSES OF SOCIAL INTEGRATION AND SOCIAL ISOLATION

Social integration is important for well-being throughout the adult life course. However, the causes of adult social integration begin much earlier in the life course, generally during childhood and adolescence. Indeed, early life course experiences have an enduring impact on integration throughout the adult years and in later life. Research has indicated that four childhood and adolescent processes and experiences are reliable predictors of adult social integration. Those processes all limit the ability of children and adolescents to form social bonds, and those limitations persist into the adult years. All the processes generally are called family social capital (Coleman, 1988). Specifically, adults have lower levels of social integration if they experienced any of the following events as children or adolescents: parental divorce, geographic mobility (especially moves that require frequently changing schools), poor parent-child relationships, and socially isolated parents (Myers, 1999).

Although these earlier experiences persist into adulthood and shape social integration, life course variables in adulthood also have contemporary effects on social integration (McPherson et al., 2006). Historically, women always have had greater levels of social integration. This trend has continued, but the differences in social integration between men and women have been shrinking. Other factors important for social integration in adulthood are age (social integration declines in one's older years), education (higher levels lead to greater integration), race (Whites are more socially integrated), and marital status (those who are married are more socially integrated). One's community also influences one's level of adult social integration. Generally, social integration is lower if one lives in a poor neighborhood and a neighborhood with higher crime rates. These factors create stress, fear, and less psychological investment in one's community, all of which are linked to lower social integration.

## THE CONSEQUENCES OF SOCIAL INTEGRATION FOR THE ADULT LIFE COURSE

Life course researchers attempt to understand the opportunities, barriers, and social structures that shape individuals' life chances and well-being. The concept of social integration is integral to this understanding because social integration acts as a conduit for both tangible (e.g., money, help) and intangible (e.g., emotional support, intimacy, connections to opportunities) resources. Although measures of social integration and their equivalents are employed in almost all aspects of life course research, three research areas stand out in the importance they place on social integration: health, crime, and immigration.

Research shows that higher levels of social integration are associated with better physical and mental health

(House et al., 1988). This finding holds for diverse outcomes, including diabetes, hypertension, depression, self-rated health, and mortality. In general, higher levels of social integration provide (a) social support, such as information and help with tasks; (b) social influence, which may encourage health-enhancing beliefs and behaviors; (c) social engagement and attachment, for example, with friends and beneficial social institutions; and (d) material resources, which may facilitate preventive care and healthy behaviors (Berkman & Glass, 2000). Critics of research on social integration and health argue that too much attention is focused on structural aspects of integration. They propose that research should be directed at understanding the role of perceived integration and the qualities of relationships.

Building on earlier theories of social disorganization (Shaw & McKay, 1942), the social scientific study of crime emphasizes social integration and support at the individual, family, and structural levels. E. T. Cullen (1994) argued that that social integration and support should be an organizing concept for studies of crime. Social integration may provide a moral compass, an orientation toward family, a set of prosocial behaviors, coping resources, economic resources, and social control. Cullen (1994) argued that crime rates vary inversely with the level of social support across nations and communities. Research supports that statement and also finds that the beneficial effects of social integration on crime accrue to adults who are at the greatest risk of committing crimes: less educated persons and those with lower incomes. Unfortunately, structural and economic inequalities may create barriers to high levels of social integration among those adults who most need those resources to generate institutional controls (Messner & Rosenfeld, 2001).

The study of immigration has long employed concepts similar to social integration, such as assimilation, acculturation, and incorporation. Immigration research generally finds that as adult immigrants socially integrate into the new country, they learn the sociocultural ways of their new communities. As a result, immigrants receive the resources and benefits that social integration provides. Research on the benefits of social integration finds superior occupational, social mobility, and health outcomes for immigrants who can integrate comprehensively into their new communities. Immigrants who do not integrate socially may be viewed as the other group, be assigned to a lower socioeconomic position, and be marginalized and socially excluded.

Some scholars counter that social integration of immigrants does not have to be absolute and complete. Instead, successful social integration involves the combination of involvement in the mainstream institutions and organizations with one's familiar social and cultural practices. From this argument, the concept of social capital has crept into the theories and research on immigration. The benefits of social integration can be realized even when such integration occurs within a specific ethnic immigrant community if that community has established links and integration with mainstream institutions and organizations (Zhou, 2005).

## THE FUTURE OF SOCIAL INTEGRATION

Social integration is an important adult characteristic that shapes life course outcomes, such as those associated with health, crime, and immigration. Research also shows that social integration can be a stratifying variable because levels of social integration are not equal across individuals. One's ability to integrate socially in adulthood is the result of a wide variety of adult statuses and characteristics. Research finds that social integration, along with its negative counterpart, social isolation, is a function of a person's physical and mental health; occupational, marital, and economic statuses; race and ethnicity; age; geographic location and mobility; and neighborhood quality.

However, the concept of social integration is broad, and social integration can be measured in numerous ways. Some researchers have abandoned the term in favor of more popular terms such as *social isolation*, *social capital*, and *social networks*. Therefore, much work is needed if social integration is to remain a useful concept for research and not just a broad construct in the social sciences.

Three avenues should be pursued by researchers in the future. First, qualitative research should be conducted on social integration in adulthood to reveal its complex and dynamic causes and consequences. Research that relies on large-scale quantitative surveys often cannot capture the interpersonal and structural processes that shape social integration in adulthood. For example, qualitative methods such as open-ended interviews could help researchers understand fully how individuals weigh the costs (such as time and effort) and benefits (such as friendship and support) associated with social integration. The demographic variables typically used in quantitative research—age, race, education, gender—do not capture these more nuanced processes. Second, much theoretical and empirical work on social integration is focused on the very young (children and adolescents) and the very old. Equal attention should be devoted to adults.

Third, social scientists should address the policy implications associated with social integration and the disparities in them. Policy is a dominant feature of international work on immigration, such as the importance of quickly integrating migrants into their destination communities. In the United States policy efforts are pursued in the educational context, but those efforts are

focused mainly on child and adolescent social integration. For example, a review of outreach policies found that parental integration into a child's school and peer-group families is the stated goal of 75% of the federally funded programs that target low-income and racial minority students (Perna, 2002). Utilizing the life course perspective in this policy endeavor could be fruitful because it would show that social integration in adulthood has significant implications for life chances and well-being.

**SEE ALSO** Volume 1: *Coleman, James; Social Capital;* Volume 2: *Durkheim, Émile; Fatherhood; Motherhood; Neighborhood Context, Adulthood; Religion and Spirituality, Adulthood; Roles; Social Networks; Social Support, Adulthood; Volunteering, Adulthood;* Volume 3: *Loneliness, Later Life.*

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***Scott M. Myers***

# SOCIAL MOBILITY

*Social mobility* refers to the extent to which the social position attained by adults is linked to the social position of their parents. Research on social mobility illuminates the degree of opportunity in a society, because it shows

whether and how advantages or disadvantages in family background contribute to one's adult social position. To that end, studies of intergenerational social mobility generally examine the extent to which *social destinations*, or the social position attained by adult individuals, are similar to or different from *social origins*, the social position of the adults' parents (and, in some studies, grandparents). Although social position can be defined and understood in different ways, the focus in mobility studies is on socioeconomic position (i.e., occupation, education, income, and wealth). The majority of sociological research on social mobility focuses on socioeconomic position as defined by occupational status or class and, in some studies, educational attainment.

For example, one seminal study compared father's occupation to son's occupation, with occupation categorized into the broad categories of farm, manual, or nonmanual, in various nations (Lipset & Zetterberg, 1956), and another investigated the impact of father's occupational status and educational attainment on son's educational attainment, first job, and current occupational status (Blau & Duncan, 1967). A large body of social mobility research has subsequently addressed questions about the linkages between childhood social origins and adult destinations, as well as questions about how these linkages may differ between, for example, nations, time periods, birth cohorts, individuals with different levels of education, racial/ethnic groups, and men and women. In answering such questions, social mobility research illustrates interdependencies between generations as well as some of the ways in which lives are shaped by key life transitions or contexts of time and place.

## DISTINGUISHING SOCIAL POSITIONS

The concept of social mobility assumes that societies contain social positions that differ meaningfully from each other. These positions are usually defined in socioeconomic terms, most often by occupation, and are often, but not always, assumed to be ranked in an inherent hierarchy. Social mobility is often described as "upward" or "downward" mobility in reference to comparing higher or lower occupations on this hierarchy. A fundamental theoretical difference among mobility researchers concerns how to distinguish occupations meaningfully.

Pitirim Sorokin (1959), a pioneer in social mobility research, suggested the existence of *vertical channels* of mobility in societies, and much work that followed was influenced by or compatible with this theory. Thus many mobility researchers conceptualized occupations as finely vertically gradated along an inherent hierarchy. For example, some research distinguishes occupations by ranking each one relative to the others in terms of occupational prestige, or similarly, on a vertical scale that measures occupations based on the average job holder's income levels and educational credentials.

In contrast, another approach to distinguishing occupations takes the perspective that mobility occurs within a structure of discrete social classes rather than a finely ranked hierarchy of occupational status or prestige. Proponents of this *class structure* approach generally view occupations as falling into relatively large categories (for an exception, see Weeden & Grusky, 2005). The large categories of occupations represent discrete social classes, the distinctions between which are not necessarily hierarchical. For example, the self-employed class may be distinct from other classes without necessarily being considered a higher or lower class position. Although hierarchy is not the most central concept in the class structure approach, it is still present—some classes are considered "lower" than all others, although the specific positions can vary between perspectives.

Within the class structure perspective, scholars have proposed defining the boundaries of the class categories in different ways. The most commonly implemented approach in current social mobility research is often known as the EGP class schema in reference to an early explication of the schema (Erikson, Goldthorpe, & Portocarero, 1979; see also Erikson & Goldthorpe, 1992). The EGP schema posits that class position distinctly shapes individuals' life chances such as through its association with specific employment conditions. It organizes occupations into class categories such that the occupations held by individuals in a given class involve similar labor market relationships (i.e., being an employer, self-employed, or an employee) and employment conditions. In particular, service or professional occupations, whose incumbents generally experience relative job security, regular advancement opportunities, and employer trust, are contrasted with working-class occupations, whose incumbents generally experience close supervision and earn a specified wage per hour of labor.

Although the EGP class schema is dominant in social mobility research, other researchers have proposed different ways of theorizing class distinctions. One such perspective, associated with the work of Erik Olin Wright (2005) and based on Marxist concepts of class, views classes as not only involving different employment conditions but also distinct and conflicting class interests. In Wright's class schema, occupations are divided into class positions with respect to class exploitation or, more specifically, with respect to incumbents' control of assets that Wright theorizes are the mechanisms of class exploitation—ownership of capital, skills or expertise, and authority. Consequently, employers are distinguished from employees, experts from nonexperts, and managers from nonmanagers (Wright, 2005; see Western & Wright, 1994, for an application to social mobility research).

## ABSOLUTE AND RELATIVE SOCIAL MOBILITY

Social mobility researchers generally make a conceptual distinction between *absolute mobility* (also termed *structural mobility*) and *relative mobility* (also termed *social fluidity*). Absolute mobility results from economic change in a society, such as shifts in job growth away from farm employment toward industrial employment. It thus results from changes in the distribution of available occupations between one generation and the next. If the proportion of higher status jobs increases in the children's generation compared to the parents' generation, all individuals in the children's generation, regardless of their class background, have a greater likelihood of upward intergenerational mobility than if the distribution of occupations remained unchanged.

Relative mobility, on the other hand, is the social mobility that remains after adjusting for differences in the distribution of occupations between parents and children's generations (i.e., absolute mobility). Relative mobility is considered a reflection of the degree of equality of opportunity in a society rather than a reflection of societal economic shifts. High relative mobility is thought to reflect a degree of equal opportunity because intergenerational movement between classes occurs when adults' class destinations are not tightly linked to their social class of origin (and the advantages or disadvantages it entails). Researchers in the United States have been most interested in relative as opposed to absolute social mobility. It is worth noting, however, that the destinations and life chances of individuals in a society are more strongly affected by absolute mobility than by relative mobility (see Breen & Jonsson, 2005, for a discussion).

## PATTERNS OF SOCIAL MOBILITY

Social mobility researchers may take different theoretical approaches to identifying social positions, but their findings nevertheless concur that significant constraints to relative mobility exist. Regardless of theoretical perspective, studies have demonstrated that the chances of achieving a particular status position as an adult depend significantly on one's social origins after absolute mobility is taken into account. In order to summarize this variation, researchers test statistical models representing various mobility patterns and select the model that they believe best summarizes the actual patterns observed in real-world data. A key pattern consistently identified by scholars is that the farther apart two classes or occupations are in a hierarchy, the lower the chances that individuals will experience mobility between them (whether upward or downward). Research findings also have illustrated a pattern of relatively high immobility in certain class positions; for example, children of the self-employed are likely to become self-employed adults (see Ganzeboom, Treiman, & Ultee, 1991, for a review).

In addition to the commonly identified hierarchy and immobility patterns, Robert Erikson and John Goldthorpe (1992) identified a pattern they termed *affinity*, in which certain classes have relatively high inter-class mobility whereas other classes have low inter-class mobility. They also identified a sector-based pattern such that mobility between agricultural and nonagricultural classes is unlikely. Erikson and Goldthorpe proposed a mobility model that incorporates affinity and sector in addition to hierarchy and immobility. Their model has been contested by others who argue that it understates the importance of the hierarchical component of social mobility (Hout & Hauser, 1992). Interestingly, regardless of the model of mobility, research suggests that mobility patterns are generally similar across nations. For example, a variety of research has demonstrated the presence of hierarchical mobility patterns across nations, and researchers utilizing Erikson and Goldthorpe's model have also found that it applies cross-nationally (see Hout & DiPrete, 2006, for a review).

## EXTENT OF SOCIAL MOBILITY

Although social mobility patterns may be generally similar between countries, the *extent* of mobility (i.e., the likelihood that an individual will experience social mobility or the frequency of social mobility) is a different question and one that has been extensively debated by social mobility researchers. Although many scholars expected the United States to demonstrate high rates of social mobility compared to European countries (due to perceptions that class is less important for life chances in the United States), an early cross-national social mobility study suggested that nonfarm mobility rates were similar among Western industrialized nations. This idea became known as the *Lipset-Zetterberg hypothesis* (Lipset & Zetterberg, 1956). This hypothesis was later reformulated by others to posit that, although absolute mobility rates may differ between industrialized nations, relative mobility rates are basically the same. This became known as the *FJH hypothesis* (Featherman, Jones, & Hauser, 1975). Subsequent research, however, has demonstrated that important differences exist between nations in both absolute and relative mobility rates. Although cross-national rankings comparing more and less mobile countries must be made with caution due to differences in data collection, research findings suggest that the United States falls toward the low end within a group of relatively high mobility countries, in which Israel, Sweden, Norway, Hungary, Poland, the Netherlands, and Canada are some of the more fluid nations. Countries exhibiting lower relative mobility rates include Great Britain, Italy,

Germany, Portugal, and Ireland (Beller & Hout, 2006; Breen, 2004; Breen & Jonsson, 2005).

In addition to addressing cross-national variation in the extent of relative social mobility, researchers also have examined differences in mobility rates within countries, including differences over time that could result either from cohort effects (changes that occur when older birth cohorts leave the workforce and are replaced by younger cohorts with different mobility experiences) or from period effects (changes in mobility that affect individuals of all ages during a given time period, such as a country's transition to post-socialism, for example). In most countries, relative mobility rates appear to have increased with time. Great Britain is an exception to this trend, however, as are Hungary and Russia (Breen, 2004; Breen & Jonsson, 2005; Gerber & Hout, 2004). One explanation for the pattern of increasing mobility over time within many countries concerns expanded access to higher education, thus granting educational opportunities even to persons with humble backgrounds.

## EDUCATION AND SOCIAL MOBILITY

Early social mobility researchers showed that educational systems contribute both to intergenerational social mobility and immobility because educational attainment plays a key role in the process of attaining an occupation. Individuals with advantaged social origins have relatively high chances of attaining a postsecondary education and vice versa. Because educational attainment is so important to occupational attainment, this link between social origins and educational attainment largely explains the link between social origins and social destinations. At the same time, however, many factors other than social origins shape educational attainment. The extent to which educational attainment depends on social origins constrains social mobility, whereas the extent to which it does not depend on social origins fosters social mobility.

In part due to its importance in the occupational attainment process, education plays a key role in mobility researchers' understandings of differences in rates of relative social mobility between countries and over time. Greater access to postsecondary education is associated with higher mobility rates in some countries, and the expansion of postsecondary education systems over time within a country can underlie rising social mobility rates over time in that country. Expanded access to postsecondary education increases relative social mobility if the linkage between social origins and destinations is weaker among individuals who achieve a postsecondary education, as research shows is the case in some countries (Breen, 2004; Breen & Jonsson, 2005; Hout, 1988). For example, an individual of disadvantaged social origins who earns an advanced educational degree is more likely to be upwardly mobile than an individual from the same background without the advanced degree.

Although societies that expand access to higher education tend to experience increased social mobility rates over time, there is evidence that this effect can weaken as more and more people earn a postsecondary degree. Also, whereas greater access to education is associated with higher social mobility in certain countries, other countries (e.g., post-socialist countries such as Poland and Hungary) achieve higher rates of social mobility for reasons not fully understood, despite comparatively low access to postsecondary education. Research also shows that mobility rates tend to be higher in countries with greater equality of educational opportunity (i.e., in countries in which educational attainment depends less on social origins) regardless of the extent of access to higher education. This pattern suggests that either equality of educational opportunity causes higher rates of relative mobility, or the same factors that foster greater equality of educational opportunity in a nation simultaneously foster social mobility (Beller & Hout, 2006).

## UNRESOLVED QUESTIONS IN SOCIAL MOBILITY RESEARCH

Many interesting questions about social mobility remain unresolved. One such question concerns how to capture the shared class position of families in measures of class origins and destinations. Although class origins and destinations can be measured in terms of the occupations held by individuals, many researchers theorize that individuals within families share a common class position. Researchers have particularly debated how to define the family-level class positions of married employed women. One position in this debate is that either the husband or the spouse with the dominant class position (i.e., the spouse with the higher position and/or stronger labor force attachment) defines the class position of all individuals in the family, regardless of whether the other spouse also has an occupation. Another view is that the class positions of families are jointly determined by both spouses. These two approaches yield different findings about women's social mobility, and the debate has not been adequately resolved (see Sorenson, 1994).

Although social mobility researchers have mainly debated the problem of determining shared family class positions with respect to class destinations, the problem is equally important when applied to social origins. It is widely accepted that social origins theoretically refer to family class background, not to fathers' class per se. In practice, however, researchers generally define social origins on the basis of a father's or head of household's occupation alone. Although some studies suggest that

both parents' positions matter for children's outcomes, the research consequences of measuring social origins without including mothers' positions have been difficult to assess, in part because of inadequate data on mothers' occupations.

The unresolved debate regarding family level class position is only one of many areas of social mobility research in which further progress remains to be made. For example, a number of scholars have called for social mobility researchers to move beyond descriptive research about social mobility processes (e.g., patterns and extent of mobility) toward more complex issues such as why mobility may be high or low in a given context, or the impact of structural factors that may affect mobility such as the clustering of men and women or racial groups within occupations, occupational segregation, labor market segmentation, or national policies. Although much interesting research remains to be conducted, the lessons of social mobility research to date compellingly illustrate the impact of intergenerational linkages for individuals' life chances and likewise illustrate the importance of national context, historical period, and educational attainment in mediating these intergenerational linkages.

**SEE ALSO** Volume 1: *College Enrollment; Cultural Capital; Family and Household Structure, Childhood and Adolescence; High School Organization; Parental Involvement in Education; School Tracking;* Volume 2: *Agency; Educational Attainment; Income Inequality; Social Class;* Volume 3: *Wealth.*

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***Emily Beller***

## SOCIAL MOVEMENTS

Humans have always found ways to register their discontent, ranging in scope from jokes and complaints to sweeping revolutions. But in the modern world they have unprecedented access to arenas, resources, ideas, and know-how that allow them to form collective efforts known as social movements. Access to all these ingredients differs according to how old people are and when they were born.

Social movements are sustained and intentional efforts to foster or retard social changes, primarily outside the normal institutional channels encouraged by authorities. For instance, gay rights advocates have used a variety of tactics, from monitoring media portrayals of gay men and lesbians to challenging discrimination to pursuing marriage rights in the courts; at the same time, however, their opponents have tried to fight these efforts and roll back any gains resulting from them. Movements are *sustained* in that they differ from single events such as riots or rallies. Their persistence often allows them to develop formal organizations, but they may also operate through informal social networks. The intentionality of

these efforts links movements to culture and strategy: People have ideas about what they want and how to get it, ideas that are filtered through culture as well as psychology.

Movements have purposes, even when these have to do with transforming members themselves (as in many religious movements) rather than the world outside the movement. Although many scholars view movements as progressive, dismissing regressive efforts as countermovements, this distinction seems arbitrary and unsustainable. Finally, movements are noninstitutional, distinguished from political parties and interest groups that are a regular part of many political systems, even though movements frequently create these other entities and often maintain close relationships to them. Most movements today deploy some tactics within mainstream institutions, and "noninstitutional" protest itself is often quite institutionalized.

## GENERATIONS OF THEORIES

Theories of discontent have always reflected the form a protest was taking at the time, as well as each writer's own sympathies and political participation. In 17th- and 18th-century Europe, thinkers such as John Locke (1632–1704) and Jean-Jacques Rousseau (1712–1778) understood the collective expression of discontent primarily as a battle against tyrannical rulers. The economic and social dimensions of emerging nation-states were not yet distinguished from the political dimensions, so protest was seen as a political act. The concept of the social movement was not yet possible.

With accelerated urbanization in the 19th century, European intellectuals were increasingly alarmed at the regular rebellions of artisans, developing the concept of the *mob*. Crowds came to be seen as a form of madness that caused individuals to act differently than they would when alone. A more sophisticated generation of crowd theorists emerged in the mid-20th century, largely in response to communism and fascism, which were viewed as forms of mass society. Until the late 1960s the dominant view of protest overemphasized the noninstitutional dimension of movements, lumping them together with fads, panics, and other collective behavior. Explicitly or implicitly, crowds remained at the heart of this vision.

Everything changed in the 1960s. Social movements were everywhere, no longer populated by working-class persons but by middle-class faces. Because many of these movements were filled with young people, middle-age scholars often dismissed them as a sign of immaturity or youthful rebelliousness. Many scholars saw these young people as unsure of their identities and in search of an ideology that would provide one (Klapp, 1969). Conservative scholars saw the young populations of less developed nations with even greater alarm, viewing them as potential sources of revolution.

A generation of scholars more sympathetic to protestors prevailed from the 1970s to the late 1990s, highlighting the sustained dimension of movements by linking them to the core political and economic institutions and cleavages of society. No longer grouped with fads, movements were now nearly indistinguishable from political parties. They were thought to reflect deep structural (and objective) interests—especially regarding class, but also gender, race, and (eventually) sexual preference. What mattered most was how they mobilized resources and interacted with government.

Alain Touraine (1977) offered a perspective that linked contemporary movements to social change instead of organizational forms. He proposed that postindustrial societies experienced conflicts over cultural understandings, especially the direction in which a society's increasing self-control would take it. The technocrats of capital and government sought profit and efficiency as ends above all else, whereas protestors viewed these as mere means. They feared that society's goals—democracy, health, quality of life—were being ignored and crowded out. Touraine's vision helped scholars recognize the significance of new social movements, such as ecology, feminism, or gay rights, populated by a political generation less concerned with personal material benefits than its elders.

Inspired by the number of young people involved in the 1960s movements, scholars in the years since have used several different age-related concepts to understand how protest and age are related: youth movements, biographical availability, protest cohorts, and political generations.

## YOUTH MOVEMENTS

Young people have been associated with social change throughout human history. They are prominent actors not only in protest but in wars, revolutions, migrations, urbanization, and technological change. They raise anxieties in their elders, who are never sure that young people will be fully and properly socialized into existing norms, roles, and institutions. They are a frequent subject of moral panics, in which they are assailed for their supposedly deviant music, motorbikes, drugs, clothes, and other aspects of youthful lifestyles (Cohen, 1972). The concept of *youth movements* has proven useful for scholars who study anything from scouting to ethnic and religious groups.

With the expansion of higher education in the affluent world during the 1950s and 1960s, the similar concept of *student movement* emerged as a way of understanding youthful political participation (Lipset & Altbach, 1969).

Some analyses emphasized the ideas to which students were exposed, others their physical concentration, and yet others their lack of a direct economic role during a lengthening period of childhood and adolescence.

Placed together in the relatively sheltered environment of colleges and universities, students had what scholars later came to recognize as free spaces in which ideas about goals and tactics could develop while being sheltered from immediate repression by authorities. In such places, people can develop movement cultures, including an ideology, an emotional sensibility, optimism about change, a collective identity and sense of community, and tastes in tactics. Free spaces foster the democratic skills (public speaking, ability to compromise, and a sense of agency) considered vital to civic participation.

There was an echo of these ideas in the theories of *new social movements* (Melucci, 1980). Many activists in these movements were people in their 30s who had been involved in the student movements of the 1960s and were looking for less dramatic ways to pursue their political goals. Others were too young to have been active in the 1960s and were trying to avoid what they saw as the romantic, utopian hopes (and subsequent burnout) of the earlier movements. This new wave of movements tried to avoid creating media stars—by rotating leadership positions, for instance—and they tried to develop group procedures that encouraged input from everyone (sometimes dubbed the *feminist process*) to avoid even informal domination by a handful of leaders.

## BIOGRAPHICAL AVAILABILITY

The disproportionate participation by young people in many movements is sometimes interpreted as due to their biographical availability. In other words, they have the free time to participate. They are less likely to have a job from which they might be fired, small children to care for, or a spouse with whom they would like to spend time. Biographical availability implies that a person has few countervailing ties to counteract the pull of mobilization. Others have observed that many movements have a disproportionate number of students and the self-employed.

Such factors do not fully account for life course differences in participation, however. After all, retirees and empty-nesters may have as much biographical availability as young people, but it is not clear that their participation rises as a result (although there has been little research on this). Young people may be more likely than older persons to participate in high-risk, high-cost protest activities that might land them in jail or inspire violence from authorities.

Protestors tend to develop tastes in tactics that remain fairly stable as they change from movement to movement, even as they face successes and defeats that might suggest the need to change tactics (Jasper, 1997, pp. 174, 240). They attach moral worth to tactics; means are never viewed as neutral. Such tastes are often specific to cohorts and generations. College students who joined the U.S. civil rights movement, for example, retained a fondness for the kind of confrontational sit-in that they had pioneered, whereas older participants continued to favor marches and lawsuits.

The contrast between these two kinds of effect reflects the difference between aging life course effects and cohort or generational effects, which need to be combined for more robust models (Braungart & Braungart, 1986). College students in the 1960s may have joined the antiwar movement in part because of their biographical availability, but that participation in turn left them more politically radical than the generations that preceded or followed them.

## PROTEST COHORTS

Different people are recruited to movements at different times, forming distinct cohorts that are often age-related. Most protest groups contain rival factions, which may have different goals or different tastes in tactics (Jasper, 1997). Factions often develop as newcomers join a movement, demanding internal as well as external changes. Each new cohort reacts to the existing routines and sensibilities within the movement as well as to problems in the broader society. Movements may grow more radical because of new recruits bringing a more combative mentality to them or because these recruits have identities based on being radical, although other theories emphasize rebuffs by the state as the key source of radicalization. These new radical flanks can have advantages as well as disadvantages.

Nancy Whittier (1995) has described the impact of successive cohorts on the women's movement in Columbus, Ohio:

> Each micro-cohort entered the women's movement at a specific point in its history, engaged in different activities, had a characteristic political culture, and modified the feminist collective identity. Each defined the type of people, issues, language, tactics, or organizational structures that "qualified" as feminist differently. Presentation of self, use of language, and participation in political culture help to identify individuals with their micro-cohorts. (p. 56)

This kind of internal conflict can preoccupy or even destroy a movement, but it can also lead to innovation and clarification.

***Anti-war Demonstrators.*** *Demonstrators carry banners and signs during a protest against the Iraq war.* AP IMAGES.

**POLITICAL GENERATIONS**

The idea that there are political generations marked by formative events is associated with Karl Mannheim (1893–1947), who was primarily concerned with the sources of human knowledge. The concept has remained useful as a way of understanding cultural meanings and collective memories, as events leave a special mark on those who, in late adolescence and early adulthood, are coming of age politically. Wars, revolutions, economic depressions, and other dramatic upheavals define political generations, as, in more modest ways, do smaller events such as a presidential campaign or the assassination of a significant social or political figure.

Mass migrations can also shape the experience of a generation in ways that affect its politics. For example, in the United States during the early and mid-20th century, African Americans left the rural south in large numbers for industrial cities, most of them in the North, generating resources and autonomy that helped produce the civil rights movement.

One key experience that shapes a generation is its political activity early in life. Considerable research has shown that those who were politically active in the generation that came of age in the 1960s have remained more politically active throughout their life course (Fendrich & Lovoy, 1988; Jennings, 1987; Whalen & Flacks, 1984). They remain more knowledgeable about politics and retain some of their early political leanings. They also are more likely to have personal identities that involve politics, the know-how to participate, and ties to social networks of others who remain politically active. Such networks provide both information and emotional encouragement to continued activism. Often, they move directly from one movement to another, related movement, taking their expertise with them; in other cases they remain active even when their movement is in the "doldrums" (Rupp & Taylor, 1987).

Of course, the existence of this political generation does not preclude age effects as well: Their participation has remained high but may also have been channeled into different mechanisms of action at different ages. The same people who, in 1968, were in the streets trying to shut down their universities might now be trying to bring about change by serving on their local school board. Again, age and generation effects interact.

## INTERGENERATIONAL CONFLICT

Although early theories of youth movements tended to see them as the result of immaturity and other psychological dynamics of participants themselves, more recent perspectives find real conflicts between generations. Structuralists tend to emphasize objective conflicts between generations and suggest that age is a core source of inequality in modern societies (Turner, 1989). A number of public policies affect the distribution of rewards and protections to people of different ages. Such policies deal with mandatory retirement ages, pensions, age-related competency, youth unemployment, school spending, and so on. Legislation may prohibit discrimination on the basis of age. Although all societies face issues of how to distribute honor and material benefits across age groups, these issues can inspire mobilization in a world of social movements. In the United States, war veterans and the elderly formed early movements to promote pensions and other welfare-state protections, and they continue to support other groups that pursue their interests.

Attitude surveys have been used in a more cultural approach to intergenerational conflict that emphasizes differences in basic values and political priorities. The largest research project along these lines stems from Ronald Inglehart's (1977) post-materialist thesis that generations of Europeans and Americans born after World War II (1939–1945) developed a feeling of security, or a freedom from warfare and material want, which allowed them to care more about their quality of life. Instead of placing priority on jobs and material well-being, they would criticize industrial society, hierarchy, and pollution in favor of greater political participation, peace, and a cleaner environment. The supposed generation gap of the 1960s and 1970s thus stemmed from differences in basic values. Later generations do not necessarily share the post-materialism of the 1960s generation, however, suggesting that there were special features of the period in which the latter came of age—a generational effect rather than a once-and-for-all change in history.

## FUTURE RESEARCH

A number of themes in current research on social movements are linked to life course research. For example, emotions, a popular topic for research, underlie many of the dynamics of age and generational effects. These might involve basic emotional commitments, such as those to families, friends, and fellow participants. They might involve different emotional reactions to grievances, which might differ by age in kind or intensity. Few have tested the popular stereotypes of younger people as having stronger emotional reactions, for instance, or of older people as more tempered by experience or family obligations. In addition, the events that define political generations are emotional as well as cognitive, often because of the moral shocks they trigger.

Because the current trend in movement research is to emphasize the ways that participants are involved in other institutions, research might investigate how these ties influence protest activities at different ages. Middle-age adults, for instance, might have positions of authority that they can use to further their ends without turning to extra-institutional outlets. The young and the old might lack such positions. The young might also lack resources that would allow them to pursue more institutionalized mechanisms, such as trade unions, again pushing them into noninstitutional means. Young people, however, might be more adept with newer media, such as the Internet, which has proven an efficient means for spreading information and mobilizing people. Research along these lines promises to overcome an unfortunate, inhibiting separation between research on movements and on more institutionalized participation.

Finally, life course research, with its frequent use of robust longitudinal techniques such as panel data, can redress weaknesses in movement research. Much of the latter depends on case studies of movements. When individuals are the unit of the analysis, they are often sampled on the dependent variable: participation. More research is needed comparing those who are mobilized with those who are not, at different points in their lives. Life course and movement research have the potential to interact in promising, fruitful ways.

**SEE ALSO** Volume 1: *Identity Development; Political Socialization;* Volume 2: *Mannheim, Karl; Political Behavior and Orientations, Adulthood;* Volume 3: *Age, Period, Cohort Effects.*

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*James M. Jasper*

## SOCIAL NETWORKS

Social network analysis (SNA) provides a direct means for examining the structural foundations of society. A social network is a collection of relationships—referred to as *edges*—connecting individuals, or aggregations of individuals (e.g., schools or businesses)—known as *nodes*. Analyzing social networks allows researchers to shift their focus from nodes and their characteristics to the spaces between them. SNA analysts examine the presence or absence of edges within the spaces between nodes and systematically analyze the patterning of those relationships within a studied population. SNA may include a variety of node types, including people, computers, places, and organizations; they focus on edges including friendship, trade, sex, shared memberships, and conversations. SNA draws on this variety of node and edge types to derive theories and methods that are equally applicable to all potential nodes and edges.

### A BRIEF HISTORY

Historically, social network analysis draws its roots from a range of academic disciplines—with mathematics, anthropology, and sociology playing especially important roles. Early research during the 1920s and 1930s in education research and observational developmental psychology began building the language of *sociometry* to describe formal properties of social organization within small groups (Moreno, 1934). Later anthropologists—along with others studying kinship in the 1940s and 1950s—dominated networks research with an aim to provide general models of the patterned relationships in kinship structures across a wide range of societies (White, 1963).

The 1970s saw a rapid increase in studies incorporating network ideas, shaped in large part by Harrison White and his students. Among the foundational pieces from this period was one of the most readily cited sociological findings—the *strength of weak ties* that demonstrated that people are more likely to benefit in job searches from their acquaintances than from their closer relationships. Granovetter (1973) argued the mechanism for this finding is based on strong personal relationships' likelihood of high redundancy. He shows that weak social ties are much less likely to overlap, therefore branching out into wider ranges of the population, and thus are more productive for seeking novel information.

Simultaneous and subsequent developments in network studies also arose in fields such as developmental psychology, education, communications, business, and most recently—physics and biology (Freeman, 2004). The past few decades have seen rapid growth in the volume of network studies produced and the range of topics they address—including the diffusion of innovations, the spread of infectious diseases, friendship and discussion networks, modes of social influence, interlocking boards of directors, and the evolution of academic disciplines. The formation of the *International Network for Social Network Analysis* and founding of the *Social Networks* journal helped consolidate these disparate scholars and range of topics into a relatively cohesive field (Wellman, 2000). Freeman (2004) provides an illuminating historical social network analysis of the development of the SNA field.

### A NEW PARADIGM?

Social science is driven primarily by only a few prevailing orientations to research—known as *paradigms*, which provide the frameworks within which scientists can produce individually testable theoretical propositions—referred to as *hypotheses*. Further, a paradigm also generally lays the ground rules for the criteria to evaluate those hypotheses—inferring particular methodological approaches. Network scholars have generated numerous theories that have been

readily incorporated into existing models of social science—such as the importance of social capital. Others have suggested that SNA provides only a new methodological tool kit for evaluating the variety of existing social theories. These new methods are important because, although many social theories are fundamentally relational in nature, current methodological approaches focus almost exclusively on individual, independent, unconnected nodes.

However, Wellman and Berkowitz (1988), among others, have consistently argued that SNA provides more than simply new theories and methods. Instead, they contend that the fundamental shift of researchers' focus from nodes to edges lays the foundations for a new research paradigm. Freeman agrees with this notion of networks as a new paradigm for social research, which he outlines as being demarcated by its: (a) focus on the structural properties of patterned links between actors, (b) empirical derivation of those patterns; (c) dependence on the graphical representation of those relationships—both intuitively and illustratively; and (d) use of complex mathematical/computational analytic methods (Freeman, 2004).

## GATHERING NETWORK DATA

To incorporate network ideas into traditional research methods, surveys of individuals can gather information about portions of their respondents' networks, simply treating this *local network data* as they would any other individual characteristic. Local network studies generally collect information about the focal individual—known as an *ego*—and their ties, such as the number and types of relationships they have, descriptions of the others—known as *alters*—with whom they have those relationships, and possibly details about the existing relationships between those alters.

Researchers interested in analyzing connections that extend beyond an initially sampled population typically expand their efforts in one of two ways. *Partial network data* not only collects information from index respondents about their alters, but also subsequently recruits those alters into the study and asks about their relationships—a process that can be repeated as many or few times as desired. Alternately, *complete network data* defines the boundaries of the population to be studied, then enumerates and describes all of the relationships within that entire population.

These three data collection strategies require vastly different techniques and amount of resources to gather (Morris, 2004). They each also produce substantially different types of data, which provide different options from the varied analytic strategies described below. The aims of the research can help the investigators consider these important tradeoffs.

## ANALYZING SOCIAL NETWORKS

The techniques available for SNA are numerous but can be classified roughly into measures that focus on node and edge composition, those that describe node position, and those that describe properties of the full network. Several handbooks detail the numerous strategies and the particular individual metrics available for SNA (Carrington, Scott, & Wasserman, 2005; Wasserman & Faust, 1994).

The first set of measures available provide a means for describing the relations between an ego and its alters. These measures capture properties that describe the composition and distribution of the nodes and edges in this bounded set. One such example calculates the density of ties, which compares the number of ties observed to the number possible. These composition measures can be calculated for local, partial, and complete network data, but the additional measures described later in this entry cannot be calculated for local network data.

When examining partial or complete networks, measures exist for describing both the position of an individual node in the network and characteristics of the entire network. Individual positional measures describe how a particular node is connected to all of the others. Centrality is a common class of measures capturing a node's position, which conceptually measures the node's comparative importance in a network. One conceptualization of centrality is based on how many edges a node has. In addition, the edges in a network can be thought of as pipes through which a *bit* can pass—such as an idea, money, or a disease. With this in mind, other variants of centrality determine the likelihood of a particular node being able to pass that *bit* to other members of the network, or the probability of a bit reaching that node (e.g., transmitting or contracting a disease, respectively). A key insight in network studies is that many individual position measures are not directly related to each other, even within a single class of measures such as centrality (i.e., having many friends is not the same as having the *right* friends) (Freeman, 1979).

Additionally, other measures focus on describing the patterns of connectivity in an entire network. One example of this type—*cohesion*—describes methods for identifying subgroups in a network that are more readily connected to each other than to the rest of the nodes in the network.

Another set of measurements assesses local composition patterns that are known to produce an impact on potential full network connectivity patterns. One of the most common of this type—*transitivity*—takes advantage

of the insight that a friend (*k*) of a friend (*j*) is likely a friend (of ego–*i*), and calculates the proportion of observed edges for all possible node-pairs (*i–k*) in an entire network, given the existence of two edges that share a node (*i–j* and *j–k*) (Holland & Leinhardt, 1972). Virtually all of the measures described here can be calculated separately for undirected edges (e.g., had a conversation) and directed edges (e.g., gave money to); many vary depending on whether analyzed as directed or not.

## NETWORK VISUALIZATION

Network data can be visualized just to illustrate the patterns found in the data, or they can be used as a means to assist in the discovery of those patterns. These visualizations typically use dots to depict nodes and lines connecting those dots to illustrate edges. Early network scholars manually produced visualizations; however, computer routines for producing these representations have become increasingly automated and are even being developed for displaying dynamic networks (Bender-DeMoll & McFarland, 2006). Network visualization techniques employ layout algorithms meant to suppress noninformative patterns, while drawing attention to the meaningful.

## NETWORKS AND LIFE COURSE RESEARCH

Many insights available using SNA have been slow to influence research not explicitly focused on developing network methods. This is largely because population-based studies common in social science use strategies to identify samples, which rarely are able to connect study participants to one another with any relationship information gathered. This limits analytic possibilities only to those developed for *local network data*. To overcome this limitation, institutional settings have been particularly attractive for network data collection, disproportionately including young people (e.g., in schools) and the elderly (e.g., in nursing homes or medical facilities). Further, because network data are often more intensive to gather, network data spanning long periods of extended observation are rare. Because of these limitations, existing work incorporating SNA into life course research typically focuses on networks immediately surrounding specific life course events, rather than network trajectories over the passage of time.

In adolescents, existing studies focus on key transitions and turning points that presumptively shape later life trajectories. For example, one substantial area of literature examines the important roles social networks play in teens' uptake and frequency of substance abuse. Network studies have confirmed that peer friendships substantially influence individuals' decisions to begin smoking and to use other substances. Perhaps more important for later health outcomes is the finding that those who do smoke, drink, or take drugs are more likely to subsequently choose friends who share those behaviors than those who do not (Kirke, 2004). As a result, having started, teens are then more likely to spend time with other teens who also abuse substances, thus decreasing their likelihood of quitting.

The time of sexual debut and subsequent sexual activity is another key transition that generally takes place in adolescence; it has been linked to a variety of later life outcomes. Therefore, many studies have examined the role teens' social networks play in determining the timing of sexual debut, and in regulating who might become potential sexual partners. On the latter point, for example, one study demonstrates that high schoolers' sexual partnering behaviors often adhere to unarticulated local configuration prohibitions (e.g., they do not partner with a former partner's current partner's former partner, described as *avoiding closed four-cycles*) (Bearman, Moody, & Stovel, 2004). This effectively creates *spanning-trees* in connecting most of the sexually active population to each other indirectly (through partners' partners' partners, and so on). This structure has direct implications for the potential spread of sexually transmitted infections in high schools, because those pathogens with long infectivity windows (e.g., herpes or human papillomavirus) are more likely to spread within adolescent populations than other pathogens with shorter windows (e.g., human immunodeficiency virus), which are likely to have a more limited spread because the timing of relationships readily breaks apart long singly-connected chains.

Some work addresses how social network patterns change over the life course, particularly in response to specific age-staged events. For example, studies of *dyadic withdrawal* demonstrate that networks of married and cohabiting people are more constricted than those observed before partnering, and likely increasingly overlap with their partner (Kalmijn, 2003). Furthermore, the segregation of social networks into age homogeneous clusters "reflect[s] institutional, spatial and cultural segregation associated with a tripartite life course" (Hagestad & Uhlenberg, 2005). These age configurations are especially exacerbated in nonkin relationships and slightly muted when limited to kin-only ties.

## NEW AGENDAS

Two of the most important ongoing areas of SNA work are developing methods for analyzing dynamic networks and generating statistical methods for analyzing network data. In addition to expanding the umbrella of SNA, these efforts are also likely to help bridge some of the gaps to more ready inclusion of network ideas into life course research. They happen to coincide with the completion of additional waves of several ongoing longitudinal studies

that have been collecting data for a number of years—such as the National Longitudinal Study of Adolescent Health, which has an explicit focus on gathering network data (Bearman, Jones, & Udry, 1997). Each of these advances combines to provide possibilities for researchers to explore how adolescent social networks contribute to outcomes later in life: both in terms of durability of previously observed behaviors and the contribution of behaviors not observed in respondents' adolescence. These new techniques and newly available data will also provide opportunities to examine how social networks change throughout the life course and the ways those changes differentially influence behavior and trajectories.

### USING NETWORKS FOR GOOD

Valente, Hoffman, Ritt-Olsen, Lichtman, and Johnson (2003) demonstrate that health promotion programs can strategically use the observed structure of social networks to enhance the spread of targeted information. However, the research remains inconclusive regarding how readily these strategies can be applied to efforts that are more general and whether they successfully transition from attitudinal shifts to behavioral change. Present uncertainties aside, more explicitly examining individuals' social network properties, and employing that knowledge in outreach efforts, at worst will help researchers better understand the potential that social networks hold for changing the relational contexts within which people experience critical life events. Further, these approaches may also provide key points of entry (relational, not temporal, although given the advances described earlier in this entry, in the best case scenario, perhaps a combination of the two) into individuals' lives to intervene for altering trajectories or providing alternative means for managing experienced events.

**SEE ALSO** Volume 2: *Friendship, Adulthood; Parent-Child Relationships, Adulthood; Sibling Relationships, Adulthood; Social Integration/Isolation, Adulthood; Social Mobility; Social Support, Adulthood;* Volume 3: *Loneliness, Later Life.*

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***jimi adams***

## SOCIAL STRUCTURE/ SOCIAL SYSTEM

The concept of the life course is predicated on an age-graded sequence of events and roles that are embodied in social structures; these structures vary from family relations at a personal or individual level to age-graded

educational organizations at the wider level. Such social structures can shape life-course experiences over time through such social institutions as marriage to shorter transitions in the life course, including those ranging from educational institutions to paid employment. These popular assumptions regarding the life course are nonetheless embedded in wider theoretical underpinnings developed by sociological approaches related to social systems and structures.

Social structure and the subsequent integration with social systems theory are longstanding sociological tenets. *Structuralism* is widely used in the social sciences and that stresses the causal force of the relations among components of an established *system* or in emerging properties with observable patterns. Its application to the understanding of the life course has, however, been less systematic and susceptible to theoretical discrepancies and unanswered criticism.

Various structural approaches are common to anthropology, sociology, psychology, and linguistics. In the first two disciplines, a distinct doctrine emerged that can be traced back to the work of Emile Durkheim (1858–1917) from the turn of the 20th century onward. Structuralism in anthropology in the 1950s and 1960s were inspired by Claude Lévi-Strauss (b. 1908), who was influenced by Durkheim's (1915) *The Elementary Forms of Religious Life*. Durkheim posited that some cognitive structures have the same forms as the components of social elements in everyday life. With more direct relevance to the life course, Mary Douglas (1921–2007) in her 1966 *Purity and Danger* studied social structures in traditional African societies, in biblical-era Judaea, and in modern society. Douglas also hypothesized that people with strong internal and external structural boundaries were more likely to honor clear rites of passage and the rules of taboo.

In sociology, structuralism has experienced a popularity of notable duration. Nonetheless, the underpinning theoretical frameworks have proved to be divergent. A number of early works from a structuralist approach addressed what is now the largely redundant concept of the life cycle. Compared with modern industrial societies, preindustrial communities were understood as displaying a less complex and relatively undifferentiated *cycle of life* and typically involved merely preadult and adult stages (although frequently subdivided into various age-graded sets)—a simple distinction that endured over generations. This basic differentiation was marked out by the near-universal phenomenon of rites of passage.

Writings that emerged from the structural functionalist school of sociology and anthropology enjoyed a noteworthy influence on the study of preindustrial tribal societies—one that accounted for rites of passage largely in social rather than psychological terms. Thus, Alfred Radcliffe-Browne (1891–1955), for example, focused on what he called the "ritual" prohibition that surrounded rites of passage in numerous societies and that served a positive function for African kinship systems among other sociocultural orders (Radcliffe-Brown, 1940).

Possibly the most significant framework, albeit with a significant degree of modification, was Erik Erikson's (1902–1994) eight-stage model of the life cycle. Erikson attempted to present the maturational relationship linking the biological, chronological, psychological, and social aspects of human progress through the life cycle as a fairly universal phenomenon. The most important aspect of Erikson's model, however, was the emphasis placed on the social context by way of significant structural relationships and institutions in which individual development occurred at any given stage. For instance, in the first year of life it was vital that the infant forged a bond of trust with his or her mother. In the next stage of life, the child ideally developed a level of self-control, which, according to Erikson, was important in the wider process of socialization and beneficial normative aspect of social control.

By the 1950s the exploration and account of social structures within sociology became connected more closely with systems theories. Such theories are largely differentiated in the extent to which they emphasize human agency and inherent normative structures in understanding the maintenance of sociocultural arrangements, as well as accounting for social change and transformation. However, the dominant sociological perspective in which the theoretical framework of social systems has been elaborated is that of structural functionalism. To be sure, one of the weaknesses of structuralism and social systems theory in its various forms has been its failure to provide a systematic account of the life course. Nonetheless, it has provided a broad framework by which to understand everyday life experiences in a range of institutional settings, including bureaucracies, educational establishments, the professions, and the family and small groups. It has also furnished insights into life experiences in the context of the dynamics of modernization, social evolution, economic change, and social disequilibrium.

Although structural functional theory has taken various forms, a few basic elements are central to its framework. Theorists who adopt this paradigm focus on the origins and maintenance of the integral and indispensible parts, structures, institutions, and cultural patterns that forge elaborate systems of norms, values, and behavior. In the most detailed formulation of social systems, Talcott Parsons (1902–1979) understood social life to be an aggregate of normative social structures and a functioning system that may vary from one society to another

according to levels of coherence, integration, and performance (Parsons, 1955).

Parsons's major contribution to the theoretical frameworks was in identifying four universal social functions that he deemed universal and indispensable if any social system was to survive ideally as a coherent and functioning whole: *goal attainment* (political and decision-making institutions that are designed to determine societal goals and priorities), *adaptation* (institutions geared to transforming the material environment), *latency* (institutions of socialization and social control), and *integration* (institutions that manage and coordinate numerous social structures and individual agents).

Although providing little by way of a systematic analysis of the life course, Parsons laid the foundations for further theoretical speculation and empirical work not least of all in identifying specific and universal socio-structural patterns that allowed people to make sense of life events and biographically structure their lives. For example, the family, for Parsons, was one of the most obvious institutions in this respect and provided a site of both latency and integration throughout life. The marriage and the establishment of the family of procreation, alongside the nurturing or early socialization of the child, denoted adult maturity and social responsibility for both genders. This was clear in Parsons's (1955) controversial account of the structuring of gender roles throughout the life course. He also maintained that in nuclear families the feminine role is expressive and the masculine, instrumental. Women thereby fulfill internal familial functions; men provide financial support and provide damilial adaptation to the society. The idea of the modern nuclear family, as well as other social institutions, being underpinned by the dominant value of instrumental individualism inspired other commentators in tracing the implications for declining extended family relationships (Beck & Beck-Gernsheim, 2004).

For Parsons, latency varies according to the evolutional stage of any given society. In premodern societies, this function tends to be carried out informally in everyday life in which typically the young learn by the instruction and examples of their elders. In modern societies, according to Parsons, socialization and social control become the preserve of formal educational institutions.

Parsons's discussion of latency also exemplifies how specific social structures or arrangement shape the life course at certain stages of life. Although clearly demarcated rites of passage take initiates from one stage of life to another and have a certain educational function for new responsibilities in premodern societies, in industrialized societies such responsibilities are more likely to be informed by new rights and duties framed in formal regulation related to specific ages. This clearly includes age restrictions related to voting, the age of consent, and marriage. Duties largely relate to civil responsibility in respect of codify laws.

Structural functionalist theories have also been applied to later life and are characterized by Elaine Cumming and Wiliam Henry's *disengagement theory* (1961) and again can be understood in terms of latency and integration. This theory implies that the major social passage in later life allows society to promote its own orderly functioning by removing older people from productive economic roles; such people welcome the opportunity to disengage at a time of declining physical and mental capacities.

Although the life work of Parsons was dedicated to establishing a coherent structuralist theory, his starting point was a general theory of social action in understanding relationships and behavior. In essence, this meant tracing any meaningful human conduct to four basic elements of ends, means, norms, and conditions that implemented action. Despite the attempt to understand social action, Parsonian and other system theories are relatively weak in conceptualizing and taking into account human agency. Thus were developed actor-oriented and dynamic systems theories, including Buckley's (1967), *modern systems theory*, Archer's (1995) *morphogenetic* theory, and the *actor-system-dynamics* (Burn, Baumgartner, & DeVille, 1985) that sought to rectify the perceived weakness of structural functionalism. In turn, few such alternatives systematically addressed the subject of the life course.

To conclude, the attempt to uncover structural determinants of the life course has been handicapped by disagreements among sociologists and anthropologists over the precise meaning of social structure. Without consensus about the important dimensions along which social structures vary, the focus of scholarship has been scattered and has not given rise to many systematic research traditions regarding the life course (although some works specialize in some aspects of it) or to relevant research in countries outside North America and Western Europe.

Other weaknesses are also observable. One problem highlighted in structuralist/social systems accounts of the life course is neglect of the so-called cohort effect, which points to the historical time and place in which experiences of the life course are forged. Another problem involves underpinning typologies: The "traditional" society amounted to a loose, catch-all typology, ranging from tribal groups, to settled agricultural societies, to large-scale feudal orders. This invariably weakened the opportunity to engage in systematic comparative accounts of particular concrete examples. No less troublesome was the typology of "modernity" in which structural/social systems theory was embedded. It is one that, in the

contemporary setting, appears increasingly redundant as a result of the emergence of late or post-modernity that is practically synonymous with the collapse of social structures and increasingly identified with discontinuity, reversibility, and flexible stages of life in respect to the life course.

**SEE ALSO** Volume 2: *Social Roles; Sociological Theories;* Volume 3: *Theories of Aging.*

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# SOCIAL SUPPORT, ADULTHOOD

An old Beatles song states, "I get by with a little help from my friends." Most people rely on family and friends for a variety of resources, including help when needed, companionship, and intimacy. Social and behavioral scientists use the term *social support* to refer to the myriad ways that adults rely on and provide assistance to family and friends. The effects of social support on health and well-being have been intensely studied for more than 30 years. Results of those studies generally find that social support benefits physical and mental health and subjective well-being, but there are important definitional and substantive complexities as well.

## DEFINING SOCIAL SUPPORT

Defining social support as the ways in which family and friends assist one another is reasonable conceptually but of limited value for measurement. Early research devoted substantial attention to defining the boundaries of social support and developing ways of validly and reliably measuring it. In the early 21st century there is considerable consensus that two major dimensions underlie the many forms and functions of social support.

One dimension concerns the extent to which social support is an objective phenomenon versus a subjective sense that support is available and of high quality, leading to the distinction between received and perceived support (Krause, 2001; Lin, Ye, & Ensel, 1999). *Received support* refers to the forms and amount of support that individuals obtain from their families and friends. Because it refers to actual supportive transactions, received support is an objective measure, to the extent to which individuals are able to report reliably about it. *Perceived support* refers to individuals' evaluations of the support available to them—whether it is sufficient for their needs, whether it is readily available, and how satisfied they are with the amount and quality of support available to them. Most researchers report that the correlations between received and perceived support are very low (Krause, 2001). Thus, receiving large amounts of assistance from family and friends does not ensure that the recipient feels that support is of sufficient amount or quality. Conversely, many people who receive little or no social support nonetheless believe that more than enough high-quality support is available, if needed.

The second major dimension of social support concerns the specific kinds of assistance provided by family and friends. Three major types of support encompass most supportive transactions (Krause, 2001; Lin et al., 1999). *Emotional support* refers to the various ways that family and friends provide comfort, validation, reassurance, and understanding to the support recipient. *Instrumental support* refers to tangible forms of assistance such as help with meals, housework, transportation, and personal care. *Informational support* refers to the knowledge that family and friends provide to the support recipient. Each type of social support can be measured as either received or perceived. For example, emotional support can be measured in terms of the amount of support received in a given period of time or in terms of the individual's perception of the amount and quality of emotional support that would be available if needed.

## ANTECEDENTS OF SOCIAL SUPPORT

The primary prerequisite for social support is a network of close relationships from which support may be obtained.

Most adults marry and have children—although rates of both marriage and fertility have declined among recent cohorts and rates of divorce remain at nearly 50% of all first marriages (Bianchi, Robinson, & Milkie, 2006). Nonetheless, the majority of adults have family members who are both potential sources and potential recipients of support. Similarly, most adults report having two to five close friends on whom they can depend and to whom they confide their problems (Fehr, 2000). Thus, adults typically have a sufficient pool of family and friends who serve as potential support providers.

The composition of one's social network also has important consequences for receipt of various kinds of support. Simply stated, social networks can take one of four forms: absence of both family and friends, family-based networks, friend-based networks, and networks that contain both family and friends. Lack of family and friends obviously precludes supportive relationships. Conversely, the most functional networks, for purposes of social support, include both family and friends. The more interesting patterns are the two forms of single-source networks. In general, family-based networks provide support for longer periods of time than friend-based networks. On the other hand, friend-based networks typically have access to a wider range of resources than family-based networks (Fiori, Antonucci, & Cortina, 2006).

Although most adults have sufficient family and friends to lay the foundation for supportive relationships, not all people are able to sustain the close relationships required. A few adults lack social networks because of either external constraints or internal dispositions. External circumstances occasionally intervene to diminish social networks (e.g., deaths) or to produce networks that lack the capacity to provide social support (e.g., network members are too impaired to offer support). A minority of adults lack social networks because of their own inability to sustain close relationships. The inability to develop and sustain close relationships is strongly linked to a variety of psychological and social characteristics including attachment style (i.e., secure with and trusting of others vs. distrusting and insecure with others), narcissism, and lack of social skills (Sharabany & Bar-Tal, 1982).

It also is difficult to sustain supportive social networks if one lacks the capacity to provide support, as well as receive it. The norm of reciprocity that dictates a relative balance between benefits given and received in social relationships is strongly endorsed in Western societies (Uehara, 1995). Imbalances can take two forms: Overbenefited individuals receive substantially more benefits from their family and friends than they provide to them, whereas underbenefited people provide substantially more benefits to others than they receive from family and friends. Both forms of imbalance generate feelings of injustice. A long-term pattern of giving more than one receives typically generates feelings of resentment. Sustained receipt of more help than one gives leads to feelings of guilt and dependency. A defining characteristic of intimate relationships is that imbalances in benefits given and received are tolerated for longer than is the case in less intimate relationships. Nonetheless, even the closest relationships can be strained—sometimes to the breaking point—by long-term imbalances in receipt versus provision of social support. Unfortunately, individuals who are mentally or physically disabled invariably need more support from family and friends than they can reciprocate—now or in the future. Consequently, the support available to persons with long-term inability to provide support to others tends to dissipate over time.

## SOCIAL SUPPORT ACROSS THE LIFE COURSE

Although children can provide social support in only limited ways, important aspects of social support begin in childhood, as children are taught norms of commitment to family, sharing, and reciprocity. Perhaps most important, children observe supportive exchanges in which family members participate. Most children first experience the receipt and provision of social support at school and have peer-based social networks in which supportive exchanges are common by the time they are teenagers (Sharabany & Bar-Tal, 1982). Although relatively little research explores the early origins of social support, it is clear that most individuals are quite conversant in the provision and receipt of social support before adulthood (Gottlieb, 1991).

Although adults of all ages are engaged in complex patterns of providing and receiving support, the three major segments of adulthood are distinctive in the size and direction of supportive transactions (Silverstein, 2006). Young adulthood is typically characterized by high levels of receiving social support and relatively low levels of providing support outside the nuclear family. Although young adults typically do not live with their parents, the major flow of social support remains from middle-age parents to their adult children. Support from grandparents also is common during young adulthood. Both older generations typically send resources down the genealogical ladder to help young adults establish stable families and careers.

Middle age is characterized by very high levels of support provision and low levels of support receipt. During middle age, individuals typically provide more

support than they receive to both their young adult children and their aging parents. Health is typically good and resources peak in middle age. As a result, middle-age persons need and receive relatively little social support. During late life, the ratio of support given versus received changes again. Older adults receive more support, especially from their middle-age children, than they did when they were middle-age. Contrary to common stereotypes, however, most older adults remain intensely involved in providing support to younger generations in their families.

In contrast to family-based patterns of social support, patterns of support among friends change little across adulthood (Mulvaney-Day, Alegria, & Sribney, 2007). Support exchanges are more evenly balanced, in terms of the provision and receipt of support, at all adult ages than those observed among family members. The norm of reciprocity is undoubtedly the major explanation for this pattern. Family relationships may become strained if there is a sustained lack of balance between the provision and receipt of social support, but they rarely end as a result of imbalance. In contrast, friendships are less likely to survive when one friend consistently gives more than the other. These patterns reflect the social norms that family ties should persist over the life course—even in the face of long-term imbalanced support. In contrast, friendships are voluntary relationships that can end with relatively few costs.

## CONSEQUENCES OF SOCIAL SUPPORT

Massive amounts of research document the generally positive effects of social support for physical health, mental health, and well-being, but important distinctions and qualifications underlie this general conclusion.

**Received Support** The vast majority of research focuses on the effects of support received from family and friends. Type of support also is important. *Perceived support* and *emotional support* are consistently positively related to better physical and mental health and greater subjective well-being. They also are associated with the prevention of illness and disability (see Cohen, 2004, for a review) and quicker recovery from mental illness (Bosworth, McQuoid, George, & Steffens 2002; Nasser & Overholser, 2005). Evidence about *instrumental support* is more mixed, with effects differing depending on the outcome of interest. Clearly, receipt of instrumental support can be critical in preventing institutionalization of older adults and reducing the need for formal care arrangements (Bharucha, Pandav, Shen, Dodge, & Ganguli, 2004; Gaugler et al., 2000). Long-term receipt of instrumental support, however, has been reported in some studies to lead to decreased feelings of mastery and control and decreases in subjective well-being (Silverstein, Chen, & Heller, 1996; Wolff & Agree, 2004). Erosion of psychological assets in the face of sustained dependency is congruent with the norm of reciprocity. *Informational support* increases the range of coping resources utilized and thus indirectly benefits health and well-being. It has not been shown to directly benefit health, however (Krause, 1987; Stewart & Barling, 1996).

**Providing Support** Although the research base is small, evidence consistently demonstrates that providing support to others benefits not only the recipients but also the provider (Krause, Herzog, & Baker 1992; Lu, 1997). To date, studies of the effects of providing support have primarily examined mental health outcomes. When a loved one needs instrumental support for long periods of time and at high levels of volume, the support provider becomes a caregiver. In contrast to more typical patterns of providing support, care giving often harms physical and mental health (see Pinquart & Sorensen, 2007, for a meta-analysis). Thus, providing support to others—but only at moderate levels—benefits health.

**Methodological Issues** Several important methodological issues must be considered when examining the consequences of social support. First, the effects of social support need to be examined using longitudinal data, or data sources spanning relatively long time periods. Cross-sectional, or single point in time, studies not only fail to provide evidence that social support affects health at a later point in time, but their results are often misleading. It is not unusual, for example, to observe negative correlations between social support and health in cross-sectional studies. This pattern does not mean that support harms health; rather, it reflects the fact that sicker people need more assistance and mobilize their social networks to provide it. Thus, at any point in time, social support is likely to be related to worse health. When longitudinal data are used, however, investigators typically observe that high levels of support protect against the onset of illness and facilitate illness recovery.

Second, and also related to the need for longitudinal data, is the issue of whether social causation or social selection (or both) are responsible for the positive relationships between social support and health. The social causation perspective views social support as the causal agent and health as the outcome. The social selection perspective argues that healthier people are better equipped to develop and sustain supportive relationships. Evidence to date indicates that both processes operate (Johnson, 1991; Wade & Pevalin, 2004). Social selection is reflected in that, as the norm of reciprocity would predict, social support often dissipates in the context of

long-term need for it, but the dominant causal direction is from social support to health.

Finally, there has been long-term debate about whether the effects of social support on health are direct or interactive. Advocates for the direct effects hypothesis argue that social support is always an asset—even when it is not acutely needed, the availability of social support promotes health and well-being. The rationale for the interactive hypothesis is that social support is needed only in times of crisis and it is only in those situations that social support benefits health—a perspective known as the stress-buffering hypothesis. Logically, these are not mutually exclusive hypotheses, and research evidence supports both of them (Hays, Steffens, Flint, Bosworth, & George, 2001; Krause, 2006). In most studies, the direct effect of social support on health is positive and significant. The direct effect of social support on health also may mediate the effects of more distal antecedents of health and well-being. Yang (2006) reported that perceived social support partially mediates the effects of disability on depressive symptoms in late life. Similarly, in a longitudinal study of Swedish men, researchers found that neighborhood-based support mediated the effects of low income on ischemic heart disease (Chaix, Isacsson, Råstam, Lindström, & Merio, 2007). Many studies also report a significant interaction between social support and health, indicating that the effects of social support are stronger during times of crisis.

Given the strong relationships between social support and health, adults would be well-advised to sustain close, personal ties with family and friends. Beyond the pleasure involved, these relationships can help protect health and facilitate recovery when ill. From a policy perspective, it is important that policies support, rather than hinder, preexisting social ties.

**SEE ALSO** Volume 2: *Friendship, Adulthood; Parent-Child Relationships, Adulthood; Sibling Relationships, Adulthood; Social Integration/Isolation, Adulthood; Social Networks;* Volume 3: *Loneliness, Later Life; Social Integration/Isolation, Later Life; Social Support, Later Life.*

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***Linda K. George***

# SOCIOECONOMIC STATUS

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# SOCIOLOGICAL THEORIES

A sociological theory is "a systematically developed consciousness of society and social relations" (Smith 1987, p. 2). Sociology is a multiparadigm science, having developed a number of important general theories. The term *general theory* is used to distinguish theories that aim at a full explanation of why and how societies exist from theories of the middle-range that aim to explain a particular phenomenon and theoretical orientations that serve as guides to research (the life course perspective is an example of a theoretical orientation). Sociological theories may be understood in terms of two competing but complementary commitments: A commitment to science and a commitment to justice. Commitment to science theories focus on discovering general principles of social life without assessing whether outcomes are ultimately just. Commitment to justice theories focus on describing, explaining, and critiquing socially produced inequalities and are frequently spoken of collectively as *conflict theory* because they assume that antagonistic interests are a fundamental feature of social life. Within these two commitments, one can identify a number of paradigms or theories grouped around a shared central concern as presented in Table 1. In addition to these two divisions, social theorists tend to describe a theory as macrosocial or microsocial in its orientation, that is, as concerned with large scale anonymous social structures or with individuals in interaction, and as focused either on agency or on structure.

## COMMITMENT TO SCIENCE: POSITIVISM

All positivist theories share five assumptions: the possibility of objective knowledge, the existence of universally applicable principles of social life, the unity of scientific method, the need for value neutrality, and the goal of creating formal expressions of social theory. The central problematic mission for modern positivism is to create a formal social theory that explains human social behavior and societal organization. Two key modern positivist paradigms are the primarily macrosocial paradigm of structural functionalism and the primarily microsocial perspective represented by exchange, rational choice, and social network theories.

**Structural functionalism** Structural functionalism offers a coherent formal theory focused on the relation between structure and agency, emphasizing structure as the shaper of agency and as functioning to ensure group survival. It proposes a triangular linkage of structure, function, and agency, a theme apparent throughout the work of its major modern progenitor, Talcott Parsons (1902–1979), beginning with his first major work *The Structure of Social Action* (1937). In structural functionalism, *structure* refers to collectively created arrangements generated out of ongoing group life, such as family, education, government, the Catholic church, and gender; *agency* (or action) is behavior undertaken by an individual actor, begun in a situation in which the actor is subject to certain conditions but also has some choice of means (Parsons, 1937) and *function* refers to the consequences of social structures for group life. For instance, gender patterns may be seen as functioning to provide a division of labor within the family. Over time, the concept of function has been elaborated to distinguish among manifest functions (the intended consequences of a structure), latent functions (the unintended consequences), and dysfunctions, which are counterproductive for the society (Merton, 1968). Central to the structural functionalist explanation of the relations among agency, structure, and function are the assumptions that the central dynamics of collective social life are those that serve to reproduce that life and that the conditions constraining agency are the dynamics that create conformity with what is already in place.

| | Commitment to Science Theories | | Commitment to Justice Theories | | |
|---|---|---|---|---|---|
| **Paradigms** | **Positivist** | **Interpretive** | **Marxian** | **Feminist** | **Africana** |
| Classical ca.1830-1930 | Comte<br>Spencer<br>Durkheim<br>Simmel | Martineau<br>Weber (Max)<br>Mead | Marx and Engels | Martineau<br>Addams<br>Gilman<br>Weber (Marianne) | Douglass<br>Cooper<br>Wells-Barnett<br>DuBois |
| Modern and Contemporary | **Structural-Functionalism**<br>**Exchange**<br>**Rational Choice**<br>Analytic Conflict<br>Macro Systems | **Symbolic Interactionism**<br>*Dramaturgy*<br>Phenomenology<br>**Social Constructionism**<br>**Ethnomethodology**<br>Post-structuralism<br>Post-modernism | **Neo-Marxian**<br>**Critical**<br>**World Systems Theory**<br>Bourdieu | Liberal<br>Cultural<br>Radical<br>**Psychoanalytic**<br>**Materialist** | Afro-Caribbean World Systems<br>AfricanaTheory |
| Integrative theories | ***Social comparison theory***<br>***Reference group theory***<br>***Role theory***<br>***Structuration theory*** | | | **Intersectionality Theory** | |

***Table 1.*** *An overview of sociology as a multiparadigm science. Boldface indicates that the theory is discussed in the article; italics indicate a middle-range theory.* CENGAGE LEARNING, GALE.

Parsons and his student and colleague, Robert Merton (1910–2003), offer five concepts essential to an explication of structural functionalist theory: social system, hierarchy of control, the functional prerequisites, institution, and status role. *Social system* describes society in terms of the interrelatedness of its parts or structures (the relationships among key institutions that include economy, politics, law, family, education, and religion). A social system is itself defined in terms of agency as "a plurality of individual actors *interacting* with each other" in a situation within normative limits (Parsons, 1951, pp. 5–6). The social system exists in an environment of other systems that affect action, *the hierarchy of control*, which includes nature, human biology, personality, other societies, and culture. All but the last of these extrasocial forces primarily affect the social system as destabilizers of pattern interaction; only the cultural system, the source of values and beliefs, works as a force for stabilizing those patterns.

Structural functionalists argue that if a social system is to reproduce itself, certain needs of group life—the functional prerequisites—must be effectively addressed. Parsons identifies four prerequisites, expressed in a model widely known by the acronym AGIL: *adaptation* to the physical environment in order to meet material needs; *goal attainment*, or collective agreements about priorities and the dispersal of resources; *integration* to settle conflicts between societal members; and *latent pattern maintenance* to transmit knowledge to and manage tensions among group members.

The work of meeting these prerequisites is done by institutions. A pivotal structure that links the social system, the agentic individual, and function, an institution is a complex arrangement of multiple status role sets and of norms, organized around satisfying one or more of the functional prerequisites. The concept of *status-role* incorporates the human actor into the social system. A *status* is a position in a system of relationships, most importantly a position in an institution; and a *role* is the behavior expected of someone in such a position. The interrelation of functional prerequisites, institutional structures, and individual actors in status roles can be conceptualized as shown in Table 2.

**Implications for the Study of the Life Course** Structural functionalism's emphasis on structure can inform the study of the life course in five ways. First, structural functionalism suggests understanding the life course as an institution meeting certain functions of the social system. The life course as an institution serves to meet the function of adaptation: If the primary structuring principle of trajectories across roles is age, then the institutions of the life course adapt to aging, the physiological change over time (a property of the biological system),

| **Adaptation** | **Goal Attainment** |
|---|---|
| Institution: economy<br>Status: worker<br>Role: perform assigned duties<br>Role Set: boss, customers, coworkers | Institution: government<br>Status: legislator<br>Role: to pass laws that will govern the use of society's resources<br>Role Set: fellow legislators,citizen constituents,lobbyists |
| Institutions: family, religion, education<br>Status: mother<br>Role: producing material and emotional stability in the home<br>Role set: husband, children, extended family, friends | Institution: court<br>Status: judge<br>Role: to determine facts and law in conflict between two parties<br>Role Set: plaintiff, defendant, lawyers, other judges |
| **Latent pattern maintenance** | **Integration** |

***Table 2.*** *Functions, Structures, and Individual Actors in Structural Functionalism. This table presents the institutions typically associated with meeting key societal functional prerequisites and suggests possible status roles within that institution.* CENGAGE LEARNING, GALE.

and to the functional needs of the social system. Indeed, the life course may be a meta-institution (a structure that transcends and connects existing institutions) linking the status roles a person plays over the lifetime to the four major functional prerequisites—for example, as a worker in the economy (adaptation); as a citizen in government (goal attainment); as a juror or claimant in the law (integration); or as a parent in the family or a student in education (latent pattern maintenance). This orientation allows one to see how an actor's individual choices over the life course sustain the social system.

Second, structural functionalism conceives of constraints on agency as beneficial for individuals rather than as a necessary sacrifice for the collective good. From Émile Durkheim's (1858–1917) classic formulation of *anomie*, or normlessness, as an unhappy condition—"all man's pleasure in acting . . . implies that by walking he advances. However, one does not advance when one proceed toward no goal . . . or the goal is infinity" (Durkheim, 1972, p. 175)—to the present, structural functionalism views socialization, the process of learning to take and play roles, as liberating humans from the chaos of unregulated desires and impulses. This perspective raises important questions about the de-standardization of the life course and whether the opening up of more options necessarily produces greater happiness.

Third, structural functionalism's elaboration of the experience of role-playing conceptualizes several themes in the life course paradigm, including linked lives and transitions. The experience of playing a role exemplifies the creative tensions in structural functionalism between agency and structure and the theory's significant emphasis on interaction as the fundamental form of the social. Actors do not perform roles alone; roles exist only in terms of relations to others because they arise out of one's having a position in a system of relationships. Within role theory as developed in structural functionalism, the key relationship is the *role set*, that is, the other persons (or positions) one must interact with in playing one's role. When those expectations come into conflict, the individual experiences *role strain*, the condition in which one cannot easily meet all the varying expectations of one's role set for a given status. *Role conflict* arises when two or more of the many statuses an individual occupies generate conflicting expectations, such as is suggested in the status label *working mother*. The experience of transition may be understood through the concept of *role exit,* the process of leaving a role or identity one has previously held for a significant length of time. Life course scholars see the individual trajectory as an age-linked movement from one role to another; structural functionalism's elaboration of the concept of role reveals complications and conflicts that surround both the experiences of duration and transition.

Fourth, structural functionalism offers a nuanced interpretation of the individual-history problematic through a multilevel analysis of the causes of social change. First, individual action may initiate changes in societal arrangements, when, as Merton (1968) points out in his theory of anomie, the goals of action upheld by the culture are out of alignment with people's access to socially sanctioned means to the goals. For instance, a socially-sanctioned goal is college attendance after high school graduation, the person who lacks the means to go to college at this juncture would experience anomie. This structurally produced stress can produce several kinds of individual nonconformity: improvising unapproved means to the goals (innovation), an empty following of means with no belief in the goal (ritualism), an abandonment of goals and means (retreatism), and an active critique of both goals and norms (rebellion). These various forms of nonconformity leach the system of the energy to reproduce itself, and for life course analysts, suggest an explanation of the ways individuals may repattern their trajectories away from conventional paths.

Fifth, social change occurs as an adjustment to changes in the environment of the social system or in other institutions. These adjustments can have a strong impact on the individual life course. For example, as biological changes lead to longer lives and more diseases of aging, the work of the adult family members is redefined to include caregiving to aging parents.

Structural functionalism argues that while structures change, functional prerequisites are a constant. This insight is useful for the cross-cultural or historical

comparative study of the life course, showing, among other things, how valued life skills may change across time and space. For example, to be dyslexic at the court of Charlemagne in the 8th century, where literacy was unnecessary, had little effect on one's life, but to be dyslexic in today's world potentially limits one's access to institutionalized means for achieving success.

**Exchange Theory, Network Theory, and Rational Choice Theory** Exchange theory, network theory, and rational choice theory share four key qualities, although each perspective is distinctive in important ways. First, they all represent a microsocial positivism, seeing individual action and interaction as the foundation of societal arrangements. Second, each builds on a particular social process or structure identified as critical and ubiquitous to social life. For exchange theory this is exchange, defined as an interaction involving the giving and receiving of tangible and intangible goods and services; for network theory it is social relations, understood as empirically observable ties that bind persons and groups to each other; for rational choice theory, it is the actions of rational actors undertaking projects in order to secure objectives judged important in terms of personal hierarchies of good. Third, all three have a studied indifference to the individual psychic processes of meaning-making, concentrating instead on visible activities common to all social actors. Fourth, they all strive for formal theoretical expression, as exemplified by exchange theorist George Homans's (1910–1989) propositions designed to predict behavioral outcomes, such as the success proposition: "For all actions taken by persons, the more often a particular person is rewarded, the more likely the person is to perform that action" (1974, p. 16).

Each theory elaborates the ways these fundamental processes and structures play out in social life. Rational choice theory generally shows human actors engaged in decision-making, assessing—for alternative courses of action—what resources they have, what costs they will incur, what benefits may accrue, and choosing the course that optimizes desirable outcomes. Exchange theorists argue that exchange shapes social structure by giving rise to norms that promote integration and by creating relations of power (Emerson, 1972; Molm, 2001). Group integration is facilitated by the norm of reciprocity, which makes possible indirect exchanges in which persons give in a context that does not allow for immediate repayment; such exchanges, Peter Blau (1977) argues, are only possible if there is a norm of trust, such as that of reciprocity, which says one will repay or be repaid in some equivalent manner at some future date. Power relations in society arise from situations of unequal exchange, where one actor needs something from another but lacks the resources or cannot afford to incur the costs to get it. The first actor may offer the second what Blau sees as subordination—an act of exchange Richard Emerson (1972) describes as creating power-dependence relations. An actor's dependence is determined by the extent to which an outcome the actor wants initiates an exchange with the other. For exchange theory, power-dependence relations are a force for social integration.

Rational choice arose out of utilitarian economics, came into sociology initially as a background presence in the assumptions of exchange theory and became institutionalized through the prodigious efforts of sociologist James Coleman who sought, in part, to craft a theory that would allow sociologists to evaluate a social system in terms of how well it met individual needs. Rational choice theory presents a model of the human actor making decisions by weighing the best means to achieve a self-selected goal. Three facts of human existence impinge on this decision-making: scarce resources (people do not have infinite resources in undertaking a course of action), opportunity costs (costs that result from other goals foregone), and institutional constraints (positive or negative sanctions facilitating some actions and hindering other actions).

Rational choice theory builds its analysis of structure through the concept of the aggregation mechanism by which separate actions by individuals combine to produce social outcomes (Friedman & Hechter, 1988)—outcomes that Raymond Boudon (1982) argues may sometimes be "perverse effects," that is, effects different from what the individual actors in their separate reasoning intended. For instance, individual actors rationally deciding to restrict family size and have only one child per couple can produce a demographic situation of an aging population without a sufficient younger generation to provide care and companionship for the older generation who find themselves 1 of 4 grandparents sharing a single grandchild.

Network theory approaches social structure by looking at the pattern of ties linking its members and at the intensity of those ties. These ties are conceptualized in terms of *deep structures*, patterns of relationship not immediately visible from a surface view of social life; *structural holes*, situations in which no connections exist between actors or groups; *social capital* (an idea initially advanced by Coleman), the resource of being connected to people; and *weak* or *strong* measured by time spent together, emotional intensity, degrees of mutual revelation, and exchange of reciprocal services.

**Implications for the Study of the Life Course** Exchange, rational choice, and network theories offer conceptual frameworks for analyzing the ways individuals make decisions that shape life trajectories—and for analyzing

the effects of these decisions on social structure. For example, individual life courses can be charted in terms of the individual's relation to exchange. In childhood, the individual gives affection and obedience in return to for care (material or emotional). The duration of childhood, defined by this exchange position, depends on both the industrial development of the society and the position of the family of origin within that society. The movement to adolescence is signaled by a sense on the part of all parties that the individual can now participate more equably in exchange, as he or she is able to offer labor and more formulated gifts of affection and service (thus, the driver's license becomes a resource in complex processes of exchange, as does access to the family car).

Adulthood is signaled in most societies by the expectation that the person will be a full partner in both economic and social exchange relations. The maintenance of long-term commitments, such as marriage, depends in part on the parties negotiating a mode of continuous exchange. From this perspective, the illness of a spouse is a major life crisis, disrupting agreed upon patterns of exchange. Retirement also creates crisis because as one moves out of formal economic exchange, one must discover new resources for exchange (e.g., grandparenting, hosting traditional events such as Thanksgiving) or risk an imbalance in power-dependence relations.

Applied to the life course, rational choice theory raises the question of whether the individual involved in making life decisions—to end one role, to begin another, to emphasize one role over another—is doing so in a rational manner as defined by the theory. Equally important is the issue of whether the concept of the life course is undergirded by an assumption of rational choice in decision-making processes—and if it is not, discovering what other processes are at work. The concept of the *aggregation mechanism* has important implications for the dialectic between individual action and social structure over the life course. For instance, there are numerous moments in economic history where an oversupply of workers in some employment sectors seems to have been the result of actors individually evaluating opportunities and rationally choosing a similar career (e.g., teaching or engineering). This "perverse effect" affects both individual life courses—for example, in the inability to find employment in what one has trained to do, disappointment, and irregularity in labor market participation—and social structure (e.g., a higher unemployment rate, too many teachers and not enough nurses, the need to offer retraining).

The major contribution of network theory to the study of the life course is the understanding that life course decisions are affected by social networks and the social capital they embody. For instance, labor market entry may be understood through Mark Granovetter's (1973) hypothesis about the strength of weak ties. Nan Lin (1999) shows that one is more likely to have a weak (rather than strong) tie to someone higher in the status hierarchy than oneself and the possession of this weak tie may prove to be the link that opens the possibility of employment.

## COMMITMENT TO SCIENCE: INTERPRETIVE THEORY

The central problematic of interpretive theory is to create a sociology that takes into account the distinctive human quality of acting on the basis of meaning. This focus gives interpretive theories a bias toward microsociology, the study of individual actors, which produces a secondary concern of how to relate individual action to macrosocial structure. While interpretive theory does not aim, as positivism does, at the production of formal theory, two theories in the interpretive paradigm, symbolic interaction and social constructionism, offer tightly argued statements linking individual action and societal organization.

**Symbolic Interaction** Symbolic interactionism has its primary origin in the work of philosopher George Herbert Mead (1863–1931) who was in debate with the radical behaviorism of psychologist John Watson (1878–1958) (which explains human behavior in terms of stimulus-response and conditioning). Mead sought to establish that mind and self can be studied as behaviors and are social in origin. Mead's work was given its formulation as a sociological theory by his student Herbert Blumer (1900–1987) in *Society as Symbolic Interaction* (1969). The foundational principle of symbolic interaction is that people do not simply respond to stimuli as do other animals. Instead, between stimulus and response, people interpret the stimulus—a process that involves taking the stimulus out of its context and making it an object by assigning meanings to it. People then respond to or interact with others on the basis of the meanings they have assigned. Furthermore, people are able to think and have a self by internalizing the social experience of communication; thus without socially experienced communication, thinking and self are not possible. Mead defines *thinking* as an internal conversation (carried on through the socially acquired symbols of language) and the *self* as a subject which is its own object. Both of these phenomena involve the ability of the individual to bring the social experience of other people into his or her own field of consciousness. This is done primarily through the human capacity for *taking the role of the other*, the process of imagining how the world and one's self look to other people. Essentially to have a self is to be able to see one's

own person as it is seen by other people; to think is to have a conversation between different parts of the self—an *I* that spontaneously proposes action and a *me* that reflects what others would say.

The ability to take the role of the other is not innate but is acquired through socialization, which occurs in three stages: *imitation*, in which a child mimics others without imagining what the action means for others; *play*, in which the child begins to imagine how he or she and the world actually appear to others and to take over some of others' meanings for action; and *game*, in which the child understands the various positions and attitudes of people involved in an activity and can synthesize those to create a sense of the way the community sees him or her and the world.

Society is composed of people engaged in symbolic interaction with each other: that is, people are always stopping and thinking, indicating to themselves what other people have said or done, and then responding. Because the majority of situations in which this happens are recurring, people build up a repertoire of indications and responses and may only experience "stopping and thinking" when a unique or problematic situation presents itself. Nevertheless, symbolic interactionism argues that the process goes on; it only seems automatic because of repetition.

**Social Constructionism** The definitive work in the development of social constructionism is Peter Berger's and Thomas Luckmann's *The Social Construction of Reality* (1966), a synthesis drawing especially on the work of phenomenological social theorist Alfred Schutz (1899–1959) and to a lesser degree on Mead and Durkheim. Social constructionism analyzes the paradox that humans produce a social reality that they come to experience as objective and independent of the producer.

Berger and Luckmann begin with an exploration of how people experience "reality" or things as "real." Following phenomenology (the branch of philosophy that deals with how the mind experiences the world), they argue that reality is conferred by the way consciousness *intends* toward—or pays attention to—an object. Different kinds of intention produce different realities—the everyday life world, the world of fantasy, the world of dreams, the world of scientific theorizing—and thus multiple realities are possible for every individual at any point in time. But the reality that concerns sociology is the reality of everyday life world that is produced by people intending toward the world in *the natural attitude of everyday life*. One feature of the intentionality of everyday life is that people are able to move between two states of consciousness: nonreflection, in which they look outward on the world, and reflection, in which they intend toward themselves, that is, toward their own consciousness.

Within the natural attitude of everyday life, people maintain and produce social reality through three moments in a process: externalization, objectivation, and internalization. Human beings externalize themselves—that is, project their thinking into the world—either through individual actions or group efforts. The products of those externalizations become objectivated in the world—experienced as existing as things in themselves independent of the persons who produced them. Those objectivated products are then internalized as independent realities, by their original producers, other people, and even across generations.

These three moments are ongoing and simultaneously occurring and are presented primarily through the medium of language. Primary socialization is thus the internalization of objectivated typifications—symbolic, usually linguistic, expressions of the essential features of a recurring phenomenon. Through socialization one acquires the relevant parts of the society's *stock of knowledge*, the *typifications* of phenomena, and *recipes* for action. Out of these and combined with group and personal experience, the individual creates a personal stock that guides action in a taken-for-granted manner "until further notice." Problems arise when the individual has experiences for which the stock of knowledge seems to lack adequate typifications or recipes.

These processes occur on the microsocial and macrosocial levels and, over time among larger groups and generations, produce *institutionalization*, the establishment of typified actions by typified actors in typified positions. As new generations question these massively institutionalized structures, *legitimations* are offered to explain why something is done the way it is. These legitimations lead to *reification*, the experiencing of a human product as something beyond human control. From a classroom syllabus to the U.S. Constitution, reification produces a situation in which people experience human products as having a reality beyond human control.

**Implications of Symbolic Interaction and Social Constructionism for Life Course Study** From the perspective of interpretive theory, the individual's negotiation of the life course involves various acts of individual consciousness and interpretation about which six hypotheses seem particularly significant. First, in early socialization the individual needs to acquire a self that has a sense of personal efficacy and achieving this depends in part on the quality of interaction with others. To navigate the life course, people need to see themselves as able to set and execute projects successfully in the world; attaining this self requires that others–particular and generalized–have defined them that way. If one belongs to a category of people defined by others as efficacious—that is, are constantly presented as leaders in cultural expressions such as

newspapers—the individual receives a sense that people like him or her can handle things. Conversely, the absence of such images can make the attainment of self-confidence harder.

Second, crises or turning points in the life course may be produced by failure in role-taking and the lack of an appropriate generalized other. Symbolic interactionism assumes that people unproblematically acquire the skill of taking the role of the other. This assumption is questioned by other theorists, most notably Schutz (1967), who argues that the concept of role-taking is based on the assumption of reciprocity of perspectives, which he believes to be flawed because were two persons to trade places, they would not see exactly the same thing due to differences in biography. This means that role-taking must be an imperfect process. Failures and negative experiences at various moments in the life course may have, as one cause, the inability to correctly take the role of a particular other or a generalized other (e.g., the student who finds they have failed to anticipate what would be on an exam). Thus an important consideration in the study of the life course must be the degree to which an individual can or cannot access the appropriate generalized other or has a wrong or inadequate generalized other for a situation. It can be hypothesized that many people's success—and the ability of professional classes to pass on status attributes to their children—results from their sharing the same generalized other as those in control, and, conversely, the failure of lower-class children may be due to a lack of a compatible generalized other.

Third, the model of primary socialization presented in symbolic interactionism may also be usefully applied to secondary socialization experiences. The stages of imitation, play, and game may describe one's initiation in to any new life stage including being a teenager, getting married, starting a new job, immigrating, or retiring.

Fourth, social constructionism urges a consideration of the life course in terms of the workings of consciousness and the organization of knowledge. If an individual is to have any experience of planful competence, he or she must have the time and space to step out of the demands of lived experience (i.e., of nonreflective consciousness) and switch to reflective consciousness, intending toward themselves as actors of a past or future state. (One cannot, by definition, reflect on the present because one only catches it in consciousness in a next moment—an axiom attested to by the experience of being asked if one is happy and having to stop and think.) Thus, planning in itself, which must involve reflection, may be emotionally frightening because it takes one away from living life.

This alternation between reflection and nonreflection affects a person's whole sense of duration. The time between transitions may at some fundamental level be unclear to an individual if these transitions are nonproblematic, because it was largely lived in nonreflection. Hence, older persons' statements that they do not "feel" older in their internal knowledge of themselves are a function of the inability of consciousness to actually reconstitute the lived, nonreflected upon experience of biologically growing old. Knowing where one is in one's life depends on being able to do acts of reflection that coordinate one's own being at a given moment with stages in the life course as outlined in the stock of knowledge of the society.

Fifth, the crisis nature of even happy transitions such as marriage or pregnancy can be conceptualized in terms of people moving into areas where their personal stock of knowledge is incomplete. Part of a transition involves figuring out how to fill in the perceived gaps in one's stock of knowledge. A person in transition may need to externalize with others about what lies ahead—for instance, expectant mothers in a waiting room or new mothers in a park. They will almost certainly try to discover what exists as objectivations in the culture for this moment—hence the enormous popularity of baby books and general self-help books. In addition, part of the stress of transition may be the feeling of needing to internalize too much too fast.

Sixth, the concept of *stock of knowledge*—and the attendant concepts of *typification* and *recipe*—help the life course scholar analyze the importance of birth cohorts, especially in a rapidly changing society. One of the things that happens across generations is that people do not share the same stock of knowledge. This difference intensifies the inherent problem in *the assumption of reciprocity of perspectives*. A knowledge organization approach may explain tensions between generations, such as with adolescents and parents. Entering a series of new worlds, adolescents find themselves lacking appropriate recipes for success and at the same time discover that their parents seem to be utterly clueless. Looked at from the social constructionist perspective, this seems less a baseless complaint than a descriptor; the parents simply do not have the knowledge that is needed. All of this is complicated by the fact that the development of a distinctive set of typifications is one of the ways that adolescents, or other groups, establish their own identity.

## COMMITMENT TO SCIENCE THEORIES: THEORIES OF THE MIDDLE RANGE

At least three middle-range theories deal with recurring themes in life course study: role theory, reference group theory, and social comparison theory. What these three theories have in common is that they have been

approached from both positivist and interpretive perspectives. The general social theory of ethnomethodology is a useful complement to role theory and has origins in both structural functionalism and social constructionism.

**Role Theory (and Ethnomethodology)** Role theory focuses on how individuals know what to do in a particular status role, which is a question that can be looked at from the perspective of structural considerations for the society or of interpretive problems for the individual. Role theory is based on the recognition that people spend much of their lifetime playing social roles (Biddle, 1986). From the structural functionalist perspective, *role* is understood as the behavior expected of someone occupying a given status in a system of relationships. In the interpretive view, the sense of one's status and role are much more open for negotiation and depend on signals from other people that have to be interpreted. The general thrust of role theory is more in the functionalist direction of role as a set of expectations that are fairly clearly understood or at least understandable, to which people seek to conform and monitor others and are monitored in terms of such conforminty and which are enforced by social monitoring.

Important work related to the question of how people know how to play roles and how they monitor each other is being done in ethnomethodology, a branch of interpretive theory pioneered by Harold Garfinkel (b. 1917). *Ethnomethodology* means "people's methods" and refers to the ways that people figure out what to do in given situations. According to Garfinkel (1967), the original question came to him when he was studying jurors: How did the jurors know that they were "doing juror"? Ethnomethodology suggests that people in everyday life situations appeal to norms in order to make sense of situations. This action of invoking a rule in a specific situation and holding oneself or others accountable for conforming to it constitutes the creation of social reality. A well-known example of ethnomethodological theory is the 1987 paper *Doing Gender* by Candace West and Don Zimmerman, which argues that while people are born with biological gender in some form, what matters socially is the gender category that is assigned to them, usually at birth. Most people pattern their life course, in part, by trying to engage in behavior that fits their gender category. This attempt to fit gender role behavior to gender category constitutes "doing gender." It is possible to talk about the "doing" orientation for a variety of roles, such as "doing student." The concept of "doing" and its attendant concept of accountability offer an important bridge between the fact of status and the execution of role. "Doing gender" can be seen in situations where groups of young women do "girl talk." There exists in that conversational moment expectations of what topics are appropriate, what tone is to be taken toward those topics, what gestures can be made (and the same is true of a group of young men doing "guy talk"). People occupy many status roles over the course of a lifetime, many of them simultaneously. As they try to meet the role expectations of any particular status, or balance the conflicting expectations of different statuses, people may experience role strain, role conflict, role confusion, role distance, and role exit.

**Reference Group Theory** Reference group theory dates to the first generation of U.S. sociologists in the work of William Graham Sumner (1840–1910) and Charles Horton Cooley (1864–1929), but it received an expansion and formulation in the 1950s with Merton's and Alice Rossi's (b. 1922) analyses of findings from Samuel Stouffer's (1900–1960) *The American Soldier* (published in 1949). Over its long use as a concept in American social science, the term *reference group* has spawned at least three different definitions (Shibutani, 1972). Essentially, however, all have in common the idea—central also to social comparison theory—that a reference group is a group that a person or another group takes as a standard for comparison in evaluating themselves, locating themselves in the world, and deciding whether to undertake or avoid certain courses of action. Reference groups are often typed in terms of how they are used by actors: A negative reference group is used to indicate conduct or attitudes one wishes to avoid; a positive reference group, to emulate; a comparative reference group, to get information about some significant dimension of one's own life (e.g., opinions, abilities, plans); a normative reference group, to get a guide to appropriate behavior within a given situation; and an aspiration reference group, to engage in anticipatory socialization.

**Social Comparison Theory** Social comparison theory has focused more on individual motivations and processes in making comparisons. Originally formulated by social psychologist Leon Festinger (1919–1989), social comparison theory began with the proposition that people are impelled to make comparisons in order to understand and evaluate the self, abilities, and opinions. This original concept of motivation has been revised to acknowledge that people may feel so impelled under some conditions, but under other conditions may find themselves presented with comparison data that they do not want (Suls, Martin, & Wheeler, 2000). This latter possibility underscores the enormous power of social comparison. Social comparison theorists have explored the kinds of groups that actors choose to make comparisons to and the conditions under which they choose groups defined as similar to themselves, groups defined as different, groups above themselves in status, and groups below themselves

in status. What emerges from the literature is a sense that, when they have the agency to do so, people are calculating and self-protective in their choice of comparisons.

**Implications for the Study of the Life course** The implications of role theory for the study of the life course have been suggested above: It offers a way to analyze people's experiences of duration and to conceptualize the experience of transition as involving a change in statuses and roles. An additional concept useful in considering the effects of age patterning over the life course is *role distance*, that is, the enactment by an individual in a particular status of behaviors intended to signal that the status does not reflect on her or his true self. The most typical examples of this given in the area's literature involve persons finding themselves momentarily in age-inappropriate roles. Ethnomethodology's concept of "doing" offers a useful lens for describing the work done by people in transition. (One of Garfinkel's first studies was of a young transsexual man in the process of changing himself into a woman.)

Reference group theory and social comparison theory are most significant in attempts to analyze how persons manage transitions. Social comparison theory, in particular, may offer insights into situations that might produce turning points. For example, a person might find themselves confronted with unsought and unwanted data about salary differentials between his or her job and those of another occupation; if the data are forceful enough and perhaps combine with other discontents, the person may feel more impelled toward major change. Reference group theory offers insights into at least one mechanism by which that transition may be planned and accomplished: the selection of an appropriate reference group to provide anticipatory socialization. The classic example is Merton's and Rossi's analysis of Stouffer, which found that enlisted men who eventually gained promotion to officer tended *not* to share the perspective of persons of their own in-group, other enlisted men, but to take on the perspective of the officer class. Changes in reference group may also account for an underexplored phenomenon in the life course—the inability of many immigrants to return to their native countries because their reference group has shifted. Equally problematic is the immigrant experience in which the actor holds to the original, but now irrelevant, reference group.

## COMMITMENT TO SCIENCE THEORIES: INTEGRATIVE THEORIES

The structuration theory of Anthony Giddens (b. 1938) is presented here as an attempt to integrate insights from interpretive theory and from structural functionalism. The concern of structuration theory is to resolve the agency versus structure debate by showing how social analysis can only be effective if both are given equal weight and their relationship understood as a dynamic duality: Social structure enables social action even as social action creates structure.

Structuration theory explores this duality by taking recurrent social practices as its object of study, that is, ongoing social activity patterned across time and space. Social practices are initiated by human actors or agents who are possessed of both consciousness and power. Consciousness is used by social agents not only to monitor the self, but also to monitor the conditions of their activity; power is their capacity for agency, their ability to affect the situations in which they act. But agents for the most part do not create social practices. Much of social practice consists of routines developed over time in response to people's needs for security and efficiency. Most of the time agents perform these actions with a nonreflective mode of *practical consciousness*. Thus, in general, agents reproduce rather than initiate social practices. Agents' actions, however, are always framed by social structures—rules and resources for engaging in practices, so that practices are patterned and similar across time and space.

Giddens (1984) identifies three main types of structures: signification, or the rules and resources of language that make communication possible and both constrain and enable what can be said; legitimation, or rules and resources that produce an ordering of values and standards; and domination, or rules and resources that make possible the exercise of power. These structures, originally arising from agents' needs for routinization, exist only in the moment when they are expressed in social practices, and never as external, determining forces. The concept of *social systems* refers to the most permanent features of social structure, expressed in highly regular and predictable sequences of social practice. Structuration may be seen in the transitional moment of the wedding: The agents (bride, groom, and families), in choosing the pattern of their wedding, even if that choice is to conform to very ritualized traditions, express agency as they reproduce those traditions and may also change structure as they choose to depart from those traditions.

**Implications for the Life Course** Structuration theory may provide a strategy for life course scholars' analyses of how an individual actor shapes a life course trajectory by exercising agency within the opportunities and constraints presented by social structure. The theory suggests that this analysis might focus on social practices, the recurring activities of actors across time and space; such a focus calls attention not just to moments of transition, when agency is high, but to the long periods of duration

when actors enact the life course through the social practices of everyday life, thereby reproducing the social structures that make that life possible. Similar to exchange theory, structuration theory points to the importance of trust in the conduct of social life; *trust* is seen here as an ultimate proof of structure. Action is possible because agents trust that a course of action will in all probability produce a given result, and that trust is based on a sense of prevailing rules and resources. It also seems possible to apply the concept of trust to moments of transition, especially voluntary transition. Here the individual agent must engage in what Giddens calls *discursive consciousness*, that is, one must consider the self as an actor in a situation and calculate what rules may apply and what resources may be forthcoming. This is possible in part because of the transposable rules (structures) that may be applied in a range of situations beyond those in which they were originally learned.

## COMMITMENT TO JUSTICE THEORIES (CONFLICT THEORY)

Commitment to justice theories look critically at socially produced inequalities and see theory as a means of creating a more just world. They describe society as an arena of struggle between unequally empowered groups—hence the description of them as conflict theories. This section describes three conflict paradigms: Marxian and neo-Marxian theory, modern feminist theory, and intersectionality theory.

**Marxian and Neo-Marxian Theory** Focusing critically on material inequality, Karl Marx (1818–1883) and Friedrich Engels (1820–1895) presented a model of society as located in history and divided into a substructure, the material economy of collective human work, and a superstructure, all other social institutions and the body of shared ideas, *ideology*. The substructure gives rise to economic classes, groups with different positions in their work arrangements, and the experiences and interests of classes in turn pattern the content of the superstructure. Throughout history the major classes have been an owner class, which claims as its property *the means of production* (i.e., the resources necessary to make goods and services), and a worker class, which, lacking access to the means of production, survives by selling its labor to the owner class by becoming a means of production. Class struggle between these two groups drives history. In the present historical moment, which is dominated by capitalism, the owner class (or bourgeoisie), in its unending pursuit of wealth through profit, engages in intensifying exploitation of the worker class (the proletariat).

Marx predicted that the revolution of the proletariat was inevitable as capitalists attempted to wring more and more profit out of labor by cutting wages and increasing hours and that such a system would give rise to a new postcapitalist phase in history. The revolution predicted by Marx and Engels has not happened. The central problematic of neo-Marxian theory is to explain why the revolution of the proletariat did not occur. Two different explanations are offered, one by the critical theorists of the Frankfurt Institute and the other by world systems theorists.

Neo-Marxian critical theory is the work of two generations of scholars. The first generation included Theodor Adorno (1903–1969), Max Horkheimer (1896–1973), and Herbert Marcuse (1898–1979), all of whom worked first in Germany and then in the United States after the rise of Nazism; the second, postwar generation works in Germany and its most prominent member is Jürgen Habermas (b. 1929).

The first generation of critical theorists addresses the lack of revolution by elaborating on Marx's concept of the superstructure. They describe their contemporary world as *an administered society*, that is, a nation-state organized to give the illusion of choice rather than real choice. This illusion is achieved by collaboration between government and capitalism. In classical Marxism, the state was seen as just another institution of the superstructure shaped by capitalism, but in critical theory the state becomes an active ally of capitalism. State and capitalism together employ the pathology of hyperrationality, that is, the use of reason to control rather than liberate people by giving people a false sense of options. Workers' capacity for independent thought is further subverted by the culture industry, the mass media that fills their time so completely that there is a loss of *negative space*, the space where people can imagine a world different from the one they are presented with daily. The ultimate product of the administered society is what Marcuse (1964) terms "one-dimensional man." The concept of one-dimensionality is meant to describe a person who is incapable of critique, who is poised for "the spontaneous acceptance of what is offered" (p. 74).

Adorno's (1950) analysis of the genesis of the authoritarian personality parallels Marcuse, but traces the loss of critical thinking to the disintegration of the family under capitalism. The father, rather than being an independent craftsman, is a wage slave and cannot provide an example of life competence for his children, who increasingly turn to charismatic political leaders to make up for this loss. Thus, for critical theorists, the revolution failed to materialize because the workers lost their capacity to think critically about their condition.

The second generation of critical theorists, lead by Habermas, tries to find some hope for change in this dark picture. Habermas argues that negative spaces, with their possibility for critical thought, persist in the *life world*, the world of face-to-face interactions in which people can know each other directly and arrive at a mutual understanding of their lived experience. He argues that they

will increasingly be presented with the *legitimation crises* of the modern democratic state brought on by the contradiction between its claims to aid the people and its structural ties to global capitalism. Legitimation crises may serve as catalysts for the critique and change of the capitalist world in place.

World systems theory shares some of the insights of critical theory, but it answers the question of why history has not evolved, as Marx and Engels predicted, by turning to conditions of the substructure. The primary fact about the organization of the substructure in the early 21st century is that the pattern is global capitalism. Capitalism has experienced unparalleled expansion by reaching out for world exploitation. World systems theory divides the mode of production in global terms, seeing a global division of labor: core areas of capital accumulation that control the means of production; semi-peripheral areas of technically skilled workers who provide the core with certain services; and peripheral areas of low-skilled workers who are used by the core as a source of raw materials and cheap mass labor. This global division of labor is marked by transnational elite solidarity on the one hand and working-class fractures on the other. These fractures are caused partly by a proliferation of organizational positions within production that lead some workers to identify with capitalists and partly by the growth of identity politics, which makes loyalty to other groups (e.g., race, religion) more significant than class identity. Finally, global capital expands markets in three ways: consumerism makes every human being a consumer (even small children); commodification brings value to products, things made to meet the immediate needs of people and not for sale, into the nexus of capitalist production and exchange (such as selling bottled water); and keeps working classes, semi-peripheral, and peripheral areas owing money to capitalists and thus subordinate.

**Feminist Sociological Theory** Feminist sociological theory derives from feminist theory, which has six broad branches: liberal, cultural, radical, materialist, psychoanalytic, and womanist. What follows draws primarily on materialist feminist and psychoanalytic feminism; the former is a reworking of Marxian theory and the latter of psychoanalytic theory.

All feminist sociological theory attempts to present an analysis of society and social relations from the standpoint of women. The first point that must be made, then, is methodological: Feminist sociological theory uses *standpoint epistemology*, that is, it founds knowledge on the assertion that all accounts of the social world are given from a particular location in society and are affected by that location.

From the standpoint of women, society is organized as patriarchy, a system of power relations designed to benefit men in all social arrangements. Feminist sociological theory focuses particularly on the arrangements of production and socialization. Its first approach to the organization of production centers on the everyday, taken-for-granted division of the social world into public and the private spheres—a division traceable historically to the industrial revolution. Social production occurs in both spheres; one key difference between Marxian theory and materialist feminist analysis is the latter's emphasis on the social significance of production done in the private sphere. Both spheres are deeply gendered. The public sphere, where the bulk of paid work occurs, belongs to men as their birthright under patriarchy; women are admitted increasingly but grudgingly as ongoing sexual harassment and pay inequity show. The private sphere, where the bulk of work is unpaid, is assigned to women; they are expected to perform homemaking tasks, which involves housework, reproduction of children, child care, emotional labor, meeting of sexual needs, health care, scheduling, money management, the production of sociality, aesthetic presentations within the house, and so on.

Dorothy Smith (b. 1926) offers a deeper look at this division of production by identifying a second division overlying the public and private division: the division of the world into *the local actualities of lived experience* and *the extralocal relations of ruling*. The local actualities are where material production is actually done and may be public or private; the relations of ruling is where elites interact to produce texts (documents, in the broadest sense) that serve to control the production done in the local actualities; contracts, wage laws, immigration laws, passports, licenses, diplomas, advertisements and so on are all examples of these texts. The relation between private and public and local actualities and relations of ruling may be pictured as shown in Table 3.

| | **Local Actuality of Lived Experience**—product here is material labor | **Extralocal Relations of Ruling**—product here is texts that govern production in local actuality |
|---|---|---|
| **Private** | All women doing work of home with only minimal assistance from men even if women also work in public sphere | Ceremonial appearances to enact heteronormativity—wife standing by erring husband is one typical enactment |
| **Public** | Most men and many women working but men paid more and have more access to more jobs | A few elite men's special province—very few women allowed entry |

***Table 3.*** *The Gender Division of Labor.* CENGAGE LEARNING, GALE.

This gendered division of labor handicaps women's attempts to move from the private to the public sphere and keeps them at a disadvantage in negotiating for wages. At the same time, the work of the home is at once romanticized and trivialized under patriarchy. The woman who works outside the home ends up doing "the second shift" at home (Hochschild & Machung, 1989).

The persistence of such a materially unfair arrangement is explained by the experience of socialization, which in all feminist sociological theory is understood as a deeply gendered process patterned by norms of patriarchy and by the institution of compulsory heterosexuality—that is, making heterosexuality and the heterosexual household the only acceptable way for persons to form homes and experience intimacy. Feminist psychoanalytic theory sees gender socialization as producing a male personality that is equipped for domination, the relationship in which the superordinate makes the subordinate an instrument of his will, a denial of the subordinate's independent subjectivity, and a female personality lacking the psychic energy to resist domination. This socialization is accomplished through differential experiences of and training in recognition, the process whereby one person acknowledges the agency of the other.

This differential experience results from the facts that "women mother" and social structure values men and women differently (Chodorow, 1978). Males are trained to win recognition; to do this, they must separate from the mother, accepting that they are different from the person who provided them with that earliest life-sustaining recognition. To do their duty by their sons, mothers must encourage them to separate at a very young age, leaving them a lifelong hostility toward women. In contrast, females are trained to give recognition as one way of experiencing agency. In adolescence, they are also encouraged to transform themselves from seekers of agency to objects of male desire—an encouragement their mothers are expected to aid in and that leaves the daughter feeling rejected.

**Intersectionality Theory** Intersectionality theory emerged from the joining of Feminist and Africana theory, especially in the work of Patricia Hill Collins (b. 1948). Its central problematic is to explain the way stratification works in the contemporary world. Intersectionality theory begins with the Africana theory conceptions that the essential societal unit is the group, understood as individuals who share a common experience that positions them in the system of social stratification, and that the essential dynamic in society is the interactions among such groups. These interactions, the relations between power and difference, shape history. The world today is organized by hierarchical power relations—a constellation of related practices in employment, government education, law, business, and housing that work to maintain an unjust system for the production and distribution of social resources. These hierarchical power relations reflect and reproduce a matrix of domination, the interaction of multiple practices of stratification, especially among the categories of class, race, gender, age, ethnicity, sexual preference, and global location. Intersectionality is the lived experience of embodying in one's person multiple dimensions of the matrix of domination. Being female and lesbian fundamentally affects the way one can create a family as opposed to the experience of being female and heterosexual; similarly, being female and poor affects the sequence in which one chooses to have children and marry in a way that contrasts with being female and professional class.

**Implications of Commitment to Justice Theories for the Study of the Life Course** The primary implication of commitment to justice theories for the study of the life course is that inequality matters. Inequality is produced by one's position in the system of production: for Marxian theory, the system of capitalism; for feminist theory, capitalist patriarchy; and for intersectionality theory, capitalist-racist patriarchy. Commitment to justice theories focus attention on the causes and consequences of inequality in the individual life course and the life course mechanisms by which social inequality is reproduced from generation to generation.

Classic Marxian theory would analyze the life course in terms of the individual's position in the substructure, beginning with a child being born into a family that occupies a particular position in the substructure—a position that in classic Marxian theory depends primarily on the father's work. This family position patterns interactions among family members and childhood socialization: Working-class parents value obedience in children because that is their experience of what secures them a place in the means of production; professional-class parents value initiative and verbal skills for the same reasons. The child's relationship to the institution of education will be largely dependent on the class position of the family. Adult experiences of sexuality, marriage, childbearing, transitions into and out of work, residence patterns, and the possibility or impossibility of retirement are shaped by position in the economic substructure.

The life course itself would be viewed as an ideology that bestows distinct life expectations to persons according to their location in the class structure. The purpose of life course ideology is to create a satisfied, nonrebellious working class that accepts that its life is as good as it could have hoped and that others who have better lives are entitled to this preferential outcome. Neo-Marxian critical theory would view many stages in the life course as products of the administered society, especially the illusions of choice about schooling, about workforce

entry, and about retirement. Critical theory sees these decisions as managed by a partnership among capitalism, the state, and mass culture to secure a passive workforce.

World systems theory calls attention to both the global nature of the substructural forces shaping individual life courses and the possibility of global mobility as a transition in the life of nearly every person on the planet. A phenomenon once typical of peripheral societies—being born to leave—now is potentially a part of planning in nearly all societies. But all capacity for intelligent individual planning may be corrupted by the erosion of negative space. The culture industry fills people's free time with innumerable images of the life course and becomes a part of many celebrations of life course transitions. For example, movies about weddings constitute an enormous and continuously profitable source of commentary on the life course. This is true not only for commercial films, but of films people make of their own weddings, as if the event would not be real if not captured in a form approved by the culture industry. Finally, life course transitions—birth, birthdays, marriages, anniversaries, graduations, new jobs, retirements, and death—are commodified into occasions to be marked by consumption.

Feminist theory highlights the different life courses of men and women. Under the ideology of patriarchy, women are socialized to a different set of life course expectations than men. Men within patriarchy understand that material success in the world (variably assessed by the classes under capitalism) entitles them and will bring with it the use of a woman. Women are socialized to measure part of their success as having a man who wants them, but that this alone is not connected to their material success—even though relation to a man brings with it a great deal of material responsibility. Men typically experience the self as competent and capable of independent action; women are more likely to experience the self as caring and generous. This means that for a woman, a successful life course requires someone to care for and look after. Women may also experience themselves as less capable of independent action, creating one danger in the female life course—the possibility of an abusive marriage, which the woman hesitates to leave because of lack of material resources, lack of confidence, and concern for how she would care for her children.

Intersectionality theory emphasizes that the life course is determined by the interaction among different vectors in the matrix of domination in an individual life, and that the relative importance of vectors may change over time. Class, gender, race, sexual orientation, and global position are all subject both to change and to change in significance. Gender may become less important as one becomes settled in one's intimate relations; race may affect one's class mobility; and class will almost certainly determine one's old age.

Theory comes from the Greek verb *therein* which means "to look at" or "see" and is also the root for *theater*, a place for viewing. Sociological theory, as a multiparadigm science, offers a variety of positions from which to view the life course. The structural functionalist position illuminates the way the life course functions as an institutional arrangement in the working of the social system. The micro-positivist perspectives—exchange, rational choice and network theories—depict the individual as a decision-maker navigating this institutional arrangement. The interpretive paradigm allows one to see how the individual subjectively arrives at and processes typified understandings of the life course and of their position in it at any given moment. The commitment to justice theories show how socially produced inequalities shape every moment of the individual's experience of the life course and that any generalization about the life course must be qualified in terms of the dictum that "inequality matters."

**SEE ALSO** Volume 1: *Coleman, James; Interpretive Theory; Thomas, W.I.;* Volume 2: *Agency; Durkheim, Émile; Giddens, Anthony; Mannheim, Karl; Marx, Karl; Mills, C. Wright; Roles; Simmel, Georg;* Volume 3: *Theories of Aging.*

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## SPIRITUALITY

**SEE** Volume 2: *Religion and Spirituality, Adulthood.*

## STATUS ATTAINMENT MODEL

**SEE** Volume 2: *Social Class.*

## STIGMA

**SEE** Volume 2: *Racism/Race Discrimination; Sexism/Sex Discrimination;* Volume 3: *Ageism/Age Discrimination; Self.*

## STRESS IN ADULTHOOD

The term *stress* is widely used in everyday life, and even scholars have defined and used the term in different ways. However, researchers who study stress have arrived at a general consensus in the definition of the concept. *Stressor* refers to life circumstances that disturb or threaten to disturb the patterns of everyday life. Stressors initiate a process of adaptation to the demands of life. The degree of adaptation required depends on characteristics of the stressor, such as its intensity or duration. Adaptations that evoke changes in psychological and physical functioning are referred to as *stress responses*. The *stress process* refers to people's ongoing adaptation (changes in physical, social, and psychological functioning) to the demands of life. In other words, the stress process is an ongoing system of adaptation to the ups and downs of everyday life; stressors are antecedents of the stress process; and stress responses are the outcomes of adaptation.

### THEORETICAL PERSPECTIVES ON THE STRESS PROCESS

Theoretical perspectives on the stress process emphasize different aspects of the relationship between an individual and his or her physical and social environment.

**Biological Perspective** The biological perspective considers the underlying physiological responses people exhibit when exposed to stressors. Author Walter Cannon (1929) wrote that the body physically prepares to handle a stressor by mounting a short-term defensive response to meet an immediate threat to physical safety. When the brain detects a potential threat, it sends an alert through the

central nervous system directly to major bodily systems (e.g., circulatory, respiratory). In response to this alert, the systems release hormones, called catecholamines, to help the person defend against the threat. This response is commonly referred to as the fight-or-flight response. The catecholamines (e.g., adrenaline) trigger processes that provide energy needed by the body to protect itself by either fighting off the threat or running away. Once the threat ceases, the brain signals the release of different hormones (e.g., noradrenaline) prompting the body to return to its normal resting state (i.e., homeostasis). This physiological response is adaptive, allowing people to successfully manage short-term physical stressors (e.g., a charging woolly mammoth, pulling a child out of deep water, running a race).

Hans Selye (1956) recognized that psychosocial stressors also could trigger the fight-or-flight response and that many stressors may endure over long time periods. Thus, he hypothesized that the body needs an alternative response to fuel a prolonged defense. Selye proposed that an alternative, neuroendocrine stress response meets this need. The brain initiates the release of a different type of hormone (i.e., glucocorticoids) that actually triggers the breakdown of proteins and excess body fats to fuel the body's longer-term response to stressors. However, without adequate recovery time between stressors, the body cannot replenish its supply of excess fats and proteins and will burn up essential body cells, eventually leading to physical illness.

The current perspective on the biological stress response suggests that the normal state of an individual is ongoing adaptation to his or her environment. Referred to as *allostasis*, this ongoing, self-regulating adaptation promotes a balance between complex bodily systems and the demands of a changing physical and social environment. In this sense, responding to a stressor is a within-person, self-regulating process that brings physiological systems back into balance. However, repeated physiological adjustments in response to a lifetime of physical and psychological stressors exact a physical cost on the body, referred to as *allostatic load* (McEwen & Stellar, 1993). It is the physical wear and tear from prolonged or continuous activation of the stress response that increases the risk of physical and mental disease and disorder (Seeman, McEwen, Rowe, & Singer, 2001). Current depictions of the stress response posit an interrelationship between the central nervous and endocrine systems, providing a more complete picture of the integrated pathway by which stressors affect health outcomes. Essentially, the initial response to a stressor is the activation of the central nervous system, with the endocrine system providing a more protracted response to stressors.

The way an individual interprets the surrounding physical and social environment affects the way he or she feels about the current situation. These feelings may prompt physiological changes through two physiological pathways: the central nervous system and the hormonal system. These feelings may also initiate behavioral changes or coping strategies to adapt to the situation. The physiological changes may initiate a change in the functioning of the immune system, which in turn may increase disease susceptibility.

**Sociological Perspective** The sociological perspective on the stress process focuses on the naturalistic causes of stress or, more specifically, on the social and environmental conditions that serve as sources of stress that then influence individual well-being (Pearlin, 1999). From this perspective, key questions relate to the social conditions (e.g., social positions, roles, and challenging life course events) that trigger the physiological stress response and how the availability and distribution of resources affect people's ability to successfully manage stressors. Stress is viewed as a dynamic and ongoing set of interrelationships between the individual and his or her social environment. Although unique circumstances do occur and do affect individuals, research into social stress is concerned with the difficult or threatening circumstances confronted by groups of people who share similar social and economic attributes, that is, the social patterning of stress. Research on social stress also examines the consequences of stress for individual well-being, especially for mental health.

**Psychological Perspective** Whereas the sociological perspective examines the social conditions that create potentially stressful situations and the consequent social patterning of stress and well-being, the psychological perspective emphasizes the internal cognitive and behavioral processes that account for individual variations in response to stressors (Lazarus, 1999). In this sense, the psychological perspective provides a bridge for understanding how life circumstances and physiological responses together affect individual health and well-being. The psychological perspective emphasizes the ways personality and biological factors combine with environmental conditions, allowing people to make meaning of the current situation with respect to individual well-being. Simply put, if an individual perceives a situation as stressful, it is a stressor. Thus, despite similarities among people experiencing a particular stressor, individuals respond uniquely to each situation. A key assumption of psychological perspectives on the stress process is that the ways people think about and interpret the circumstances of everyday life changes their physiological response to those circumstances.

**Integrated Perspective** Although several perspectives are used to study stress, a common goal for all of them is gaining an understanding of how individuals adapt to the changing circumstances of daily life and the impact of that adaptation on well-being across the life course. Rather than being at odds with each other, integrating findings from different perspectives has the potential to provide a more complete explanation of the stress process and to more effectively delineate the impact of social stress on individual health and well-being (Wheaton, 2001).

## TYPES OF STRESSORS AND THEIR EFFECTS ON WELL-BEING

Selye (1956) proposed that anything that initiated a stress response constituted a stressor. Such a broad definition, however, makes it difficult to systematically study the individual components of the stress process. Thus, social stress research categorizes sources of stress to examine their distinct origins and develop better methods for further investigating their consequences. Social stressors are challenging conditions emerging from the social contexts of everyday life, including traumas, life events, chronic demands and strains in specific life domains (e.g., work and at home), and minor interruptions to one's daily routine (daily hassles). Typically, physical stressors (e.g., environmental exposure to hot or cold weather) and psychological stressors that focus largely on one's perceptions of a social stressor (e.g., ruminating and reliving past situations, or catastrophizing about a current situation) are not considered types of social stress.

**Trauma** Extreme events that both overwhelm a person and disrupt the life course (e.g., a violent crime, war, or a life-threatening illness) are referred to as traumas. The magnitude and suddenness of these events may disrupt a person's mental and physical well-being long after the occurrence of the event (Pearlin, 1999).

One often-studied trauma is combat exposure or war stress. Beginning after World War II (1939–1945), systematic research documented the effects of combat exposure on psychological health. This research led to the establishment of posttraumatic stress disorder (PTSD) as a psychological condition (Fontana & Rosenheck, 1994). PTSD is an anxiety disorder observed in persons who have been exposed to an extreme stressor. In addition to its immediate detrimental impact, war stress has the potential for both ongoing disruption to the life course and onset of PTSD symptomatology late in adulthood. The effects of wartime trauma extend beyond people with direct combat exposure. Similar disruptive and long-term effects have been found in both children of military parents (Shaw, 2003) and nonmilitary relatives of military adults. PTSD and other severe psychological disorders also have been associated with exposure to other trauma conditions, including natural disasters and severe physical injury.

**Life Events** Life events are discrete, observable, and objectively reportable changes that require some adjustment on the part of the individual experiencing them. Examples include marriage, divorce, death of a loved one, and loss of a job. Exposure to life events, particularly undesirable and uncontrollable events, is associated with increases in psychological distress. A long research tradition linking life events and depression provides compelling evidence for a direct link between life events and onset of major depressive disorder, especially the onset of one's first major depressive disorder (Kendler, Karkowski, & Prescott, 1999). Stressful life events have also been linked to negative physical health outcomes such as coronary heart disease and other physical disorders, including rheumatoid arthritis (Zautra et al., 1998) and AIDS or HIV (Leserman et al., 1999). Although several studies provide strong support for a link between life event stressors and physical disease and disorders, the findings must be interpreted with caution, as it may be the combination of life events with other factors (e.g., ongoing life difficulties, social support, current health status) that influence health outcomes.

**Chronic Stressors** Chronic stressors are persistent or recurrent life difficulties, including strains in particular areas of life (e.g., job demands and family responsibilities), conflicting social roles (e.g., being a parent and worker), or excessive complexity in everyday life. Chronic stressors activate a prolonged immune response that may lead to physical diseases, including those that suppress immune response (e.g., infection), as well as those that overactivate the immune response (e.g., allergic and autoimmune responses). The open-ended nature of chronic stressors (not knowing when, or if, the stressor will end) may deplete biological, psychological, and social resources and thus be particularly influential in increasing the risk of distress and disease.

Job strain, or the combination of high job demands and low control over those demands, is a typical example of a chronic work-related stressor that contributes to negative psychological and physical outcomes. The effects of job strain may be particularly harmful in high-strain jobs, such as those for service workers and machine-paced operatives (Repetti, 1989).

Caregiving for loved ones is another source of chronic stress. The responsibilities of a primary caregiver include meeting the demands of caring for a loved one with a serious illness as well as the emotional burdens associated with the loved one's increasing physical and mental

impairments. Leonard Pearlin, Joseph Mullan, Shirley Semple, and Marilyn Skaff (1990) referred to the cascading burden of caregiver stress as *stress proliferation*, or managing both primary stressors of caregiving (e.g., tending to the patient's meals, medications, and hygiene) and secondary stressors (i.e., additional demands unrelated to the person's illness). Role strains and resentments are examples of secondary stressors that may emerge when children care for an aging parent (Suitor & Pillemer, 1993).

Although chronic stressors are a distinct type of stressor, there is often an interrelationship between types of stressors. Ongoing job strain may lead to an acute life event, such as job layoff. Alternatively, an acute life event such as a divorce may give rise to ongoing financial difficulties. Thus studies that focus on a single type of stressor may understate the harmful effects of stressors.

**Daily Hassles** Daily hassles are defined as relatively minor events arising out of day-to-day living, such as a last-minute change on a work project or a flat tire. Although they may not have the same impact as a life-altering event, daily hassles do significantly influence daily health and psychological well-being. Studies of daily stress and health provide a unique opportunity to examine the unfolding process of stress adaptation within a person (i.e., how the same person responds to changing conditions) by documenting how a person's reactivity (i.e., how likely he or she is they are to experience distress) fluctuates. Daily diary studies, in which people record their experiences and their reactions to them, offer insight into the dynamic interplay between stressor exposure and reactivity and how the two combine to affect daily health and well-being (Almeida, Wethington, & Kessler, 2002).

To put it another way, everyone has good days and bad days. On good days, a person may be less reactive to experiences; on bad days, he or she may be more reactive. Daily studies also consider how the characteristics of a stressor may trigger different responses, both for the same person and for different groups of people. One study found that the type of daily stressor affected variations in mood (Bolger, DeLongis, Kessler, & Schilling, 1989). Of the 10 categories of stressors studied, interpersonal tensions were the most upsetting for both men and women.

In a follow-up study, David Almeida and Ronald Kessler (1998) found that although exposure to stressors was associated with higher levels of distress for both husbands and wives, wives reported more stressors overall than did husbands. In addition, family demands, arguments with a spouse, arguments with a person besides the spouse, transportation difficulties (e.g., traffic jams, car trouble), and other demands (e.g., those of relatives or friends) were more strongly related to distress for wives than for husbands, whereas work overloads, arguments with children, and financial problems were more strongly related to distress among husbands than among wives.

**Associations among Types of Stressors** Stressors rarely occur independently; one stressor may trigger a number of subsequent stressful experiences. Chronic stressors may lead to more daily hassles or life events. Even minor stressors can increase in intensity by accumulating and disrupting other aspects of a person's life or usurping resources needed to manage subsequent circumstances. Thus, considering the association among the stressors in a person's life is important to understand the effects of stress on health and well-being. For example, ongoing financial strain following a divorce or job loss may be more damaging to individuals health than the actual event itself.

## COPING WITH STRESSORS

Coping typically refers to the things that people do to manage the ups and downs of life. Coping includes both the cognitive and behavioral strategies people use as well as the resources they apply in managing the demands of life.

**Coping Strategies** There are two primary coping strategies: problem-focused and emotion-focused. Problem-focused coping refers to efforts directed at resolving or removing the source of the stressor—for example, taking an alternate route to work to avoid traffic caused by road construction. In contrast, emotion-focused coping strategies address the negative emotions and feelings of distress triggered by a stressor. Rather than feeling frustrated or angry at traffic delays due to construction, a person may tell him or herself how easy the ride to work will be when the road is finished, or use the time to think about the pleasant things that she or he will do when they arrive at home. In these examples, the stressor is unchanged, but the negative reaction to the stressor dissipates.

Much research on coping examines which emotion-focused and problem-focused strategies are effective at minimizing the impact of stressors. Emotion-focused coping strategies are often associated with *increased* distress (Penley, Tomaka, & Wiebe, 2002). Passive coping strategies—for example, avoiding difficult situations rather than dealing with them—have been found to be associated with higher levels of depression and psychological distress. Denial as a coping strategy (e.g., ignoring worsening symptoms or saying that a personal problem "is not real") also may be maladaptive for chronic illnesses because it does not allow for learning to manage the long-term stressor (Burker, Evon, Losielle, Finkel, &

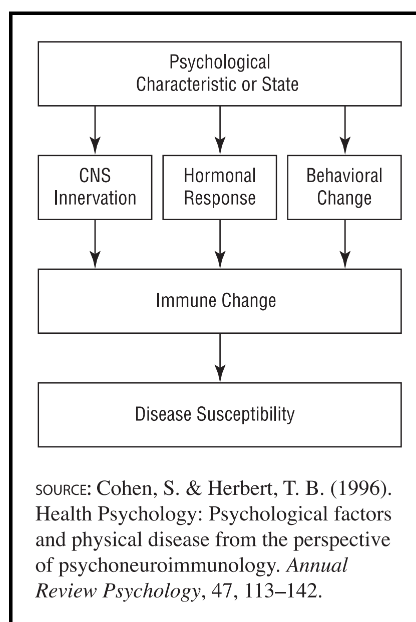
Mill, 2005). In contrast, however, denial may have positive effects for people dealing with certain short-term stressors by diverting attention from the stressor until it has passed. For example, one study found that avoidant coping was most effective in dealing with the stress of donating blood (Kaloupek, White, & Wong, 1984).

Problem-focused coping strategies, such as seeking social support and problem solving, tend to be favored in individual-oriented Western nations. Problem-focused strategies have been associated with better outcomes for patients dealing with a variety of illnesses and also with helping a patient's partner psychologically adjust to his or her loved one's illness (Chandler, Kennedy, & Sandhu, 2007). In general, however, most effective coping responses, particularly to severe stressors, involve multiple strategies (Folkman, 1997).

**Coping Resources** Coping resources are assets people have that may alter their reaction to stressful circumstances. In other words, resources are not the things that people do (e.g., strategies) but rather the things they can apply to meet the needs and demands of challenges. Coping resources may be internal (i.e., within the person) or external (i.e., outside of the person).

*Internal resources* refer to psychological resources that may help or hinder how people cope with stressors. Personality traits are an example of internal resources. Enduring personality traits are typically associated with differing coping strategies. Personality traits are often conceptualized as consisting of five main dimensions: neuroticism, extroversion, openness, agreeableness, and conscientiousness (McCrae & Costa, 1986). In terms of use of coping strategies, emotion-focused coping tends to be used by those with high levels of neuroticism, as well as by those who are open and agreeable. Extroversion and conscientiousness, as well as agreeableness, have been associated with the use of problem-focused coping strategies (Penley & Tomaka, 2002). It is possible that these personality characteristics themselves may serve to either exacerbate or buffer the effects of stress. For example, in an experimental study in which participants were assigned a stressful cognitive task (giving a speech on a controversial topic), people who were extroverted, open, agreeable, and conscientious were more satisfied with their performance on lab tasks than those with high levels of neuroticism. Neurotic individuals also reported more negative emotions such as anxiety, fear, and self-disgust (Penley & Tomaka, 2002). A similar pattern emerges in response to chronic stressors.

Other personality traits also may modify the impact of a stressor. For example, an optimistic disposition buffers the effects of stressors for patients suffering from chronic diseases perceived to be uncontrollable (Fournier, de Ridder, & Bensing, 2002). Whether a person sees events as within his or her control (*internal locus of control*) or outside of his or her control (*external locus of control*) has been shown to affect people's responses to stressors; an internal locus of control is more effective in coping with stressors. Negative events are more strongly correlated with anxiety for people with external, as opposed to internal, locus of control (Sandler & Lakey, 1982).




SOURCE: Cohen, S. & Herbert, T. B. (1996). Health Psychology: Psychological factors and physical disease from the perspective of psychoneuroimmunology. *Annual Review Psychology*, 47, 113–142.

***Figure 1.*** CENGAGE LEARNING, GALE.

*External resources* refer to the available tangible and social assets people can apply to offset the impact of potential stressors, such as money, social characteristics, and social resources. In their seminal work on the structure of coping, Pearlin and Carmi Schooler (1978) found that certain social characteristics had an impact on coping. For example, pronounced differences were found between men and women. Women were more likely to use coping responses that increased distress, such as selective ignoring, whereas men were more likely to use psychological resources that actually diminished stress reactivity in response to life problems, such as optimism. Additionally, lower socioeconomic status was associated with increased exposure to hardships and more reported stressors. People with lower socioeconomic status were also less likely to possess the necessary resources to buffer the negative distress associated with these hardships. The availability and type of social resources also may contribute to coping differences. *Social resources* refer to the people in one's social network, such as family, friends, and coworkers, who may offer tangible assistance and emotional support.

Some evidence suggests that the potential buffering effects of resources depend on the type of stressors being faced. For example, findings from a study conducted in

England examined the links between psychological resources and illness-related death (Surtees, Wainwright, & Luben, 2006). Findings suggested that a strong sense of mastery was associated with lower rates of death due to cardiovascular disease, whereas a sense of coherence, the belief that the things that happen are manageable and meaningful, was associated with lower rates of cancer death. In a separate study conducted in the Netherlands, researchers found that the psychological resource of self-esteem lessened the effects of cancer and arthritis on depressive symptoms, whereas the psychological resource of mastery lessened the effects of only diabetes on depressive symptoms (Bisschop, Kriegsman, & Beekman, 2004). In contrast, having a partner, an important social resource, lessened the negative psychological effects of a variety of chronic diseases.

## INTERDEPENDENCE OF SOCIAL RELATIONSHIPS AND THE STRESS PROCESS

Considering the interdependence between individual experiences and the experiences of close others is important for understanding both the stressors that people experience and their responses to those stressors. Most human behavior takes place in the context of relationships with others. In virtually every study examining human happiness, satisfying close relationships are an integral component of well-being (Berscheid, 1999). Glen Elder (1999) referred to the interdependence of social relationships as *linked lives*, where the individual life course is influenced by experiences and life transitions of other social relationships. Because of these interdependencies, social relationships play an important part in the individual stress process. Social relationships make it easier to handle the challenges of life, offering emotional and tangible support during difficult situations. Indeed, supportive relationships are associated with decreased risk for morbidity and mortality (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002).

**Family Relationships** Each stage of the life course is both the consequence of prior experiences as well as the antecedent for subsequent life experiences (Spiro, 2001). Thus, early family life is important for understanding people's responses to stressful experiences. Family interactions establish both the initial trajectory of the life course as well as patterns for managing life experiences. First, biological families determine a person's genetic endowment, which lays the foundation for lifelong characteristics such as disposition or temperament and for predispositions to health conditions such as depression or heart disease. Family relationships and family environments influence the individual stress process in other ways as well, including exposure to different types of stressors, selection of coping strategies, and development of social skills.

Rena Repetti, Shelley Taylor, and Teresa Seeman (2002) considered the long-term effects of growing up in a "risky" family. These authors defined risky families in terms of their relationship interactions, specifically those that have high levels of conflict and aggression or relationships that are cold, unsupportive, and neglectful. Ongoing exposure to conflictual family relationships can literally change the underlying physiological mechanisms for handling even routine challenges by continually activating the stress response. This chronic activation may lead to later deficits in physical health, such as coronary heart disease. These life experiences contribute to early wear and tear on the body, or allostatic load.

Families also may influence the individual stress process by modeling coping strategies and patterns for handling day-to-day life experiences. Once established, coping patterns are difficult to change. Repetti et al. (2002) suggested that growing up in families with high levels of conflict or anger results in the use of less adaptive coping strategies, such as those that focus on reducing tension or escaping from intense emotions rather than dealing with the stressor itself. Although escape from the angry situations in the home may be adaptive for their immediate safety, over the long run these avoidant coping strategies may result in other costs such as social problems with peers and difficulties in problem solving.

Finally, the family environment may influence the development of children's social skills. Repetti et al. (2002) found that children who grew up in risky families had problems processing emotions. Emotion-processing skills are essential for engaging in healthy relationships with others. High levels of conflict in the home may sensitize children to respond to social situations with negative emotions such as anger and anxiety. In adolescence, these children may demonstrate less control over their emotions and less understanding of emotions. Because children model the social behavior that they learn at home, they may develop unhealthy ideas about how relationships work. Indeed, there is evidence that the children of cold, unsupportive, or neglectful parents continued to experience problematic and unsupportive relationships throughout their life (Repetti et al., 2002).

**Romantic Relationships** Studies often find that married people tend to enjoy physical, emotional, and economic advantage, compared to their unmarried counterparts (Coyne & DeLongis, 1986). Romantic relationships can be an important source of social support. For example, one study found that support from a spouse was more strongly associated with life satisfaction and

positive mood than support from friends or family (Walen & Lachman, 2000). This suggests that there may be something unique about the kind of support that a spouse can provide. Unfortunately, interpersonal relationships are not always supportive and may actually be a source of strain. Relationship conflicts are among the most potent of stressors, evoking strong psychological and physiological responses in both men and women (Bolger et al., 1989). Exposure to high levels of stress also may have an impact on the quality of one's relationships. Thus, whereas having a supportive spouse may ameliorate the impact of stress, ongoing exposure to stress may also strain relationships.

**Peer Relationships and Friendships** Friendships are another type of close social relationship that may modify the individual stress process. Social networks that include supportive friends are one of the best predictors of overall life satisfaction and physical health. The presence of a supportive friend has been associated with lower cardiovascular reactivity in response to acute stressors (Kirschbaum, Klauer, Filipp, & Hellhammer, 1995). Similar to romantic relationships, friendships can be sources of both support and strain. Negative interactions with friends are more predictive of depressed mood than supportive interactions.

Much of the literature on the relation between friends and one's stress level has examined the role of friendships during adolescence and young adulthood, particularly in undergraduate samples. Friendships are particularly important during this time in life—perhaps even more important than family relationships. For example, a study that examined first-year college students adjusting to school life found that increased social support from friends, but not the family, was associated with better adjustment (Friedlander et al., 2007). Thus, friends can be a great source of support for managing stressors.

Epidemiological studies on the health of older adults provide substantial evidence that social integration and social support contribute to longevity. In a review of the protective effects of social support from friends and family and the health of older adults, Seeman (2000) suggested that it is the pattern of support received, rather than the source of support, that contributes most to health outcomes. Thus, social support that is perceived as critical, demanding, or conflictual has a negative effect on both morbidity and mortality rates in older adults.

Research on the influence of friends and well-being during middle adulthood is limited, comparing the influence of friends to the influence of others (e.g., spouse or relatives). For example, Pamela Jackson (1992) found that for married parents who are employed full time, spousal support lessened the depressing effects of all types of life strain whereas the support of friends was limited to specific domains (i.e., marital, economic, and health). Additionally, under high-stress conditions, such as those for people diagnosed with AIDS, for example, family support was found to be more important than support from friends (Crystal & Kersting, 1998). In summary, although the importance of friendships on individual health and well-being may be an important resource for managing the individual stress process, additional research in this area, particularly during adulthood, is needed.

## PHYSIOLOGICAL PATHWAYS BETWEEN STRESSOR EXPOSURE AND DISEASE

As described in part above, psychosocial stressors are risk factors for a broad range of physical diseases. Stress-related illnesses include minor physical ailments, such as colds, allergies, back pain, and headaches, as well as severe diseases such as coronary heart disease and cancer. Research has thus focused on the specific physiological processes linking stress exposure and disease.

The physiological response to stressors involves direct stimulation of the central nervous system and a hormonal relay system among three main organs: the hypothalamus and the pituitary gland, located in the brain, and the adrenal glands, located at the top of each kidney. Both the central nervous system and the hypothalamic-pituitary-adrenal (HPA) axis play a vital role in linking stressor exposure to physical health outcomes (Cohen & Herbert, 1996; McEwen, 1998). Much of the research on the link between psychosocial stress and health has focused on the cardiovascular and immune systems, as these two systems are directly involved in the etiology of several disease processes (Cohen & Manuck, 1995).

**Coronary Heart Disease and Stress** Coronary heart disease is the leading cause of death in European and North American populations (Brydon, Magid, & Steptoe, 2006) and is gaining momentum in developing countries. Epidemiological evidence suggests that psychological stress has a profound effect on cardiovascular functioning and the development of coronary heart disease globally (Rosengren et al., 2004). A rich literature documents the association between psychosocial stressors and incidence of heart attack in Western countries. However, an increase in both coronary heart disease mortality and psychosocial stress among eastern European populations, especially middle-aged men (Weidner & Cain, 2003), suggests that the health risk of psychosocial stress extends beyond the border of Western societies. An international study on the association between

psychosocial stress and heart attack in 24,767 people in 52 countries provides evidence for the association (Rosengren et al., 2004). The study found that for people reporting their first heart attack, stressful life events, general stress, and financial stress were more frequent compared to controls. The findings were consistent across regions, genders, and ethnic groups.

Reactivity to stressors is thought to account for the relationship between exposure to psychosocial stress and coronary heart disease. High stress reactivity increases vascular inflammation (atherosclerosis), which in turn leads to a build up of plaque in the arteries (arteriosclerosis), in turn increasing the likelihood of heart attack (myocardial infarction) and stroke. Stress reactivity also increases production of platelets. Platelet activation releases substances into the blood stream that adhere to arteries, which results in plaque buildup and may also account for the association between reactivity to stressors and coronary heart disease (Brydon et al., 2006). Laboratory studies examining the association between reactivity to acute stressors and atherosclerosis find that people who are more reactive to acute lab stressors demonstrate more evidence of cardiovascular disease (Barnett et al., 1997; Player, King, Mainous, & Geesey, 2007).

**Psychoneuroimmunology and Stress** The immune system protects the body from foreign materials, such as bacteria and viruses, by releasing antibodies and white blood cells into the circulatory system. Psychological stressors increase the risk of illness and disease by altering the immune response, making the body less able to defend itself against foreign materials. Research examining these associations since the late 1980s has provided a much clearer understanding of the process (Kemeny & Schedlowski, 2007).

The strongest evidence for a direct link between psychosocial stressors and the etiology of physical disease comes from studies on stress and viral infections, such as colds and the flu (Cohen, Tyrrell, & Smith, 1993). In these experimental studies, healthy volunteers answered questions about life stress and were then inoculated with a virus to examine the impact of stressors on health outcomes. After several days, health symptoms evaluated through both self-report and physiological measures (i.e., blood draws) suggested that exposure to psychosocial stressors increased susceptibility to upper respiratory infection. An association between stressor exposure and other infectious diseases has been documented in both laboratory studies (Kiecolt-Glaser & Glaser, 1987) and in studies on the progression of immune diseases, including HIV and rheumatoid arthritis. Findings from these studies support the idea that exposure to both acute and ongoing stressors contributes to a worsening of health conditions and disease symptoms.

## CONCLUSION

All people, regardless of age, gender, or social situation, face changing life circumstances and are therefore engaged in a process of ongoing adaptation. A life course perspective suggests that researchers study people of varying social and economic backgrounds at different life stages (e.g., childhood, adolescence, adulthood) to identify the kinds of challenges they are facing and the processes they are likely to use in dealing with those challenges. There are several reasons why this life course perspective is vital in the study of stress. First, adverse early-life circumstances (e.g., poverty, abuse, neglect) have both immediate and long-term effects. Second, adaptation to severe, unexpected events may be very different depending on the timing of the event—consider the implications, for example, of the loss of a job in young adulthood compared to the loss of a job near retirement age. Finally, the frequency and type of life circumstances people face as well as the impact on the life course are likely to vary by age, socioeconomic status, gender, and culture. Thus, the study of stress and the life course emphasizes the importance of examining people engaged in ordinary activities of everyday life, so as to enable the understanding of how life circumstances account for exposure to various types of stressors and, in turn, how the availability of resources to combat these stressors contributes to variability in individual health and well-being.

**SEE ALSO** Volume 1: *Resilience, Childhood and Adolescence;* Volume 2: *Mental Health, Adulthood; Midlife Crises and Transitions; Roles.*

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# SUICIDE, ADULTHOOD

Suicide refers to the willful taking of one's life. A life course perspective on suicide helps to address two fundamental questions about the causes of suicide: (a) Are there individual-based factors such as lifelong depression that affect suicide risk independent of stage in the life course, and (b) to what extent do the common transitions in adulthood, such as marriage, parenthood, and employment, predict suicide risk?

## THE PSYCHIATRIC PERSPECTIVE ON SUICIDE

The most well-researched area in adult suicide is the linkage between certain psychiatric disorders and suicide risk. Most suicides result, in part, from a serious psychiatric disorder. For example, in a review of 3,275 suicides, researchers found that 87.3% of the victims had been diagnosed with a mental disorder prior to their death (Arsenault-Lapierre, Kim, & Turecki, 2004). Similarly, E. Clare Harris and Brian Barraclough (1997) systematically reviewed 249 research studies. Of the 44 disorders investigated, 36 were found to significantly raise the risk of suicide. Table 1 provides a summary of the average risk for suicide among people experiencing selected psychiatric disorders in which at least nine studies linking the disorder and suicide were available. For example, on average, major depression increases the risk of suicide 20.4 times, whereas schizophrenia increases it 8.5 times.

| Psychiatric Disorder | Increased Odds of Suicide for Persons With the Disorder vs. Controls | Number of Research Studies | Number of Persons Studied |
|---|---|---|---|
| Eating Disorder | 23 | 13 | 1,300 |
| Alcohol Dependence and Abuse | 6 | 32 | 45,000 |
| Opioid Dependence & Abuse | 14 | 9 | 7,500 |
| Schizophrenia | 8.5 | 38 | 30,000 |
| Major Depression | 20.4 | 23 | 8,000 |
| Bipolar Disorder | 15.1 | 14 | 3,700 |
| Dysthymia | 12 | 9 | 50,000 |
| Mood Disorders | 16 | 12 | 10,000 |
| Epilepsy | 4.9 | 12 | 6,500 |
| Suicide Attempts by self poisoning | 40 | 11 | 8,000 |
| Suicide Attempts, any method | 38 | 9 | 2,700 |

***Table 1.*** *Average risk ratio for selected psychiatric disorders.* CENGAGE LEARNING, GALE.

Substance abuse disorders are among the best-researched disorders. A recent meta-analysis of 42 comparable research studies found that substance abuse disorders increased the risk of suicide above that experienced in the general population as follows: alcohol use disorder 9.7 times, opiate use disorder 13.51 times, intravenous drug use 13.73 times, mixed drug use 16.85 times, and heavy drinking 3.51 times (Wilcox, Connor, & Caine, 2004). A different meta-analysis calculated an annual suicide rate of 193 per 100,000 persons among those with anxiety disorders, including the posttraumatic stress and panic disorders (Khan, Leventhal, Khan, & Brown, 2002). By contrast,

| Group | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2004 |
|---|---|---|---|---|---|---|---|
| White Males | | | | | | | |
| 25–44 | 17.9 | 18.5 | 21.5 | 24.6 | 25.4 | 22.9 | 23.8 |
| 45–64 | 39.3 | 36.5 | 31.9 | 25.0 | 26.0 | 23.2 | 26.1 |
| Black Males | | | | | | | |
| 25–44 | 9.8 | 12.6 | 16.1 | 19.2 | 19.6 | 14.3 | 13.7 |
| 45–64 | 12.7 | 13.0 | 12.4 | 11.8 | 13.1 | 9.9 | 10.1 |
| White Females | | | | | | | |
| 25–44 | 6.6 | 7.0 | 11.0 | 8.1 | 6.6 | 6.0 | 6.6 |
| 45–64 | 10.6 | 10.9 | 13.0 | 9.6 | 7.7 | 6.9 | 8.5 |
| Black Females | | | | | | | |
| 25–44 | 2.3 | 3.0 | 4.8 | 4.3 | 3.8 | 2.6 | 2.9 |
| 45–64 | 2.7 | 3.1 | 2.9 | 2.5 | 2.9 | 2.1 | 2.2 |
| Ratio of Male 25–44 to Female 25–44 Suicide Rates | 2.7 | 2.64 | 1.95 | 3.0 | 3.8 | 3.8 | 3.6 |

***Table 2.*** *Suicide rates per 100,000 By gender, race and age group, adult, 25–64 population, USA, 1950–2004.* CENGAGE LEARNING, GALE.

annual suicide rates for the general population in developed nations typically range between 10 and 20 per 100,000 persons.

Schizophrenia, a condition marked by perceptual distortions of reality including auditory and visual delusions, generally begins to take hold in early adulthood. In case-series studies, an investigator follows a group of people diagnosed as schizophrenic and determines the proportion that die through suicide at follow-up some years later. A review of 30 such studies determined that, on average, 37.7% of male and 27% of female schizophrenics had committed suicide by follow-up, typically 5 to 15 years after the onset of the study. In contrast, only 1 to 2% of the population of developed nations dies through suicide (Lester, 2006).

One investigation exploring the relation between various psychiatric factors and suicide risk involved a large, 18-year study that tracked the lives of 444,297 persons in Denmark, including 21,169 who committed suicide during the study period. Researchers found that the group with, by far, the highest risk of suicide was former mental patients during the first 8 days of being discharged. Their risk of suicide was 278 times that of nonmental patients (Qin, Agerbo, & Mortensen, 2003).

That biological factors are involved in the transmission of psychiatric disorders across generations is consistent with findings on suicide risk within families. For example, persons who committed suicide in the Denmark study were 3.5 times more apt to have had a first-degree relative who also had committed suicide, relative to similar people in the general population.

Although the psychiatric perspective explains much of the variation in adult suicide risk, it does not fully explain secondary variation (or subgroup differences) in risk, such as the large gap in suicide rates between men and women, and the considerable variation in suicide rates over time and among geographic units such as cities, states, and nations. Work on other risk and protective factors needs to be considered to fully understand the causes of adult suicide.

## INDIVIDUAL-LEVEL RISK AND PROTECTIVE FACTORS

**Gender** In what approaches something akin to a social science law, adult males tend to have a suicide rate that is between 2 to 4 times that of adult females. Data on U.S. suicide rates between 1950 and 2004 by race or ethnicity and gender are provided in Table 2.

Researchers have advanced many hypotheses to explain the gender differential in suicide, with these hypotheses drawn from prior research on gender differences in behaviors and attitudes. These behaviors include

factors such as alcoholism rates, which are higher among men, and men's greater knowledge about and ownership of firearms. There are also gender differentials in help-seeking behavior for mental disturbances, such that females have a greater tendency to seek professional help for psychiatric problems. Females also generally have more extensive support networks than males (Stack, 2000). Although these factors help explain the gender gap at one point in time, additional factors are needed to explain trends.

Table 1 shows that the suicide gender gap in the United States changed between 1950 and 2004. For White persons ages 25 to 44, the male to female suicide ratio decreased from 2.7 in 1950 to 1.95 in 1970. From 1970 it increased to 3.6 in 2004. Sociological analysis of this curvilinear relationship has been done both in the United States and in 17 other developed nations. The main explanation for it is that after a critical mass of women enters the labor force, cultural definitions of women's (and men's) role in society change. Cultural approval of women working while raising children was relatively low in the 1950s and contributed to feelings of role conflict between homemaker and worker. However, as the proportion of working women increased, culture defined the working mother in positive terms, lessening any guilt feelings about tension between the worlds of work and family. There is corresponding growth in supportive cultural institutions and patterns such as day-care centers and greater male involvement in housework and childcare. Unfortunately, male suicide rates have held steady or increased as female rates have decreased. This male response is related to declining opportunity for men to enter and advance in managerial professional careers (Stack, 2000).

**Race** Whites generally have had a suicide rate that is double that of African Americans. However, this pattern is somewhat weaker for young adults (see Table 2). The best available national database on suicide is the National Mortality Followback Survey (National Center for Health Statistics, 2000). It contains detailed information on 9,869 adult deaths (ages 18 to 64), including 948 suicides. An analysis of this database found that controlling for 18 other contributing factors, including age and depressive symptoms, White adults were 1.85 times more likely than minorities to die through suicide.

Several explanations have been advanced for the race–suicide relationship. The first such argument posits that societal discrimination against African Americans has contributed to a particular response, the externalization of aggression. Given the history of racial discrimination in the United States, Blacks are more apt to blame others than themselves when confronted with stressful life events. As a consequence, Black homicide rates are five or more times those of Whites. A second argument notes that tolerance of suicide, suicide acceptability, is considerably lower among Blacks than Whites. Finally, religiosity levels are higher among Blacks than Whites. Religions tend to condemn suicide (Stack, 2000).

## LIFE COURSE EVENTS AND SUICIDE IN ADULTHOOD

Suicide rates increase from childhood to adulthood. During the adult years there are life events that act as risk and protective factors for suicide. The more well-researched life events include several regarding measures of social integration, an individuals ties, and social and interpersonal networks that provide emotional support and, hence, reduce suicide risk. Marriage, parenthood, living alone, migration, as well as economic strain, which is shown to increase suicide risk in adulthood, are all areas that have been given specific attention in their relation to suicide prevalence (Stack, 2000).

**Marital Status** During adulthood marriage is a powerful protective factor against suicide. A review of 789 research findings from 132 studies published over 115 years found that 78% demonstrated a link between divorce and increased suicide risk (Stack, 2000). For example, in Austria, divorced persons had a suicide rate of 128.6 per 100,000 compared to 30.5 per 100,000 for married persons. The ratio of the divorced to married rate, the coefficient of aggravation (COA) of 4.22 is in the typical range for adult men in the United States. The COA for men in the United States ranges from 4.58 for men ages 40 to 44 to a low of 3.53 for men ages 60 to 64. For adult American women, the COA varies from a high of 4.15 for women ages 25 to 29 to a low of 2.10 for women ages 60 to 64.

**Cohabitation** Although there is little research on the protective effect of cohabitation on suicide risk, what does exist suggests that cohabitation does not protect as much against suicide as marriage. For example, in Denmark, cohabitants have a risk of suicide 1.54 times higher than married persons, whereas single persons have a risk 3.17 times higher than that of married persons (Qin et al., 2003).

**Living Alone** Living alone contributes to suicide through minimizing emotional support from intimate relationships. An analysis of the National Mortality Followback Survey determined that after controlling for depressive symptoms and 17 other predictors of suicide, persons who lived alone were 1.58 times more likely to die through suicide than those not living alone (National Center for Health Statistics, 2000).

**Parenthood** Dating back to early research conducted by French sociologist Émile Durkheim (1858–1917), sociologists have documented the tendency for married persons with children to have a lower rate of suicide than married persons without children. For example, in Denmark, parents with a young child are 50% less apt to commit suicide than parents without a young child (Qin et al., 2003). Ties to children can increase purpose or meaning in life and increase the odds of going on with life in the face of adversity—for the sake of one's children.

**Migration** Persons who migrate, especially over long distances, break ties with friends, extended family, coworkers, and other sources of social support. Although not as well-studied as marital ties, migration tends to be related to suicide risk. For example, controlling for depression and 17 other predictors of suicide, an analysis of the National Mortality Followback Survey determined that persons who changed residence in the previous 12 months were 4.32 times more likely to die through suicide than persons who did not move (National Center for Health Statistics, 2000).

**Religiosity** A large body of sociological research has found that the higher a person's level of religiosity, the lower their suicide risk (Stack, 2000). Religions tend to condemn suicide as a sin, promote social networking and support among coreligionists, and offer a variety of beliefs (e.g., a pleasant afterlife), which can act as coping mechanisms in times of adversity. For example, in the National Mortality Followback Survey, controlling for the effects of 18 other predictors including depression and living alone, persons who reportedly were active in religious activities had an 18% lower probability of dying through suicide (National Center for Health Statistics, 2000).

**Socioeconomic Status** Measures of economic strain generally raise the risk of suicide by creating an environment marked by hardship and disappointments. Variation in risk of suicide among adults is associated with variation in income levels. For example, a large, over-time study of suicides in Denmark determined that persons in the lowest quartile in income were 5.52 times more apt to die of suicide than persons in the top quartile in income (Qin et al., 2003).

**Job Demotions** The limited research on downward social mobility indicates that job demotions increase suicide risk. An analysis of the National Mortality Followback Survey determined that persons who were demoted at work had a suicide risk 5.06 times greater than those who were not demoted in the past 12 months (National Center for Health Statistics, 2000).

**Unemployment** Being out of work raises the risk of suicide independent of depression and other predictors of suicide. For example, marked differences exist in London, England, where the suicide rate of the unemployed was 73.4 per 100,000 compared to 14.1 per 100,000 for the general population. Controlling for 12 other socioeconomic predictors of suicide, unemployed persons in Denmark were 18% more apt to die through suicide than fully employed persons (Qin et al., 2003).

**Opportunity Factors** Suicide rates reflect contextual factors that provide the opportunity for suicide attempts. For example, an analysis of the National Mortality Followback Survey found that, controlling for depression and 17 other predictors of suicide, persons who had a gun available in their homes were 3.41 times more apt to die through suicide than persons with no gun available (National Center for Health Statistics, 2000).

## COMMUNITY-LEVEL PREDICTORS OF ADULT SUICIDE

Many of the individual-level predictors of suicide risk have been used to predict the suicide rates of cities, counties, states, and nations. For example, divorce rates of the 50 American states, in each of five census years during 1940 to 1980, were the single best predictor of state suicide rates (Stack, 2000). At the community level, divorce rates measure not only low levels of social integration among the divorced members of the state but also problems in intimate relationships (including marriage) in general. For example, the classic work of Durkheim (1966/1897) on suicide took divorce as an index of a trend in society toward individualism, where people pursue their own self-interests and are guided less and less by traditional ties to groups such as marriage, religion, and other institutions. It should be noted that divorce rates are often found to be correlated with other characteristics of states such as income level, but the association between divorce rates and suicide rates remains strong even after these covariates are controlled.

**Imitation** At least 105 studies to date have explored the association between the appearance of widely publicized suicide stories and suicide rates. Evidence supporting the existence of imitation or copycat effects includes a study based in New York City around the time of the publication of Derek Humphry's (b. 1930) *Final Exit* in 1991, a book advocating suicide among terminally ill persons by plastic-bag asphyxiation. Researchers found that suicide by this method increased by 313% and that 27.3% of these suicides were found with a copy of the book next to

them. However, many studies report no copycat effect. Among the most likely stories to trigger copycat effects are those concerning well-known celebrities such as entertainers and political officials. A meta-analysis of 419 research studies on copycat suicides determined that investigations that explored the impact of the suicide of a well-known celebrity were 5.27 times more apt than other studies to report a copycat effect (Stack, 2005).

## PREVENTION AND TREATMENT POLICY

In 2002 an estimated 877,000 persons committed suicide worldwide. In response to suicides, many countries have developed suicide prevention and treatment programs. Prevention programs include suicide educational programs in the schools, education of primary care physicians regarding suicide risk assessment, and general public education through the media concerning signs of suicide risk. Treatment programs have included pharmacotherapy using antidepressants or antipsychotic drugs and psychotherapy, including alcoholism treatment programs and cognitive-behavioral therapy. Means restrictions programs have attempted to lower suicide rates by limiting access to highly lethal means of suicide (e.g., gun control). The effectiveness of these suicide prevention and treatment programs is rarely evaluated. Based on the limited evaluation research available to date, some of the more promising suicide prevention strategies are further educating primary care physicians so they are more able to detect suicide risk and the restriction of lethal means of suicide (Mann et al., 2005). Evaluation research of media education and school-based suicide prevention programs is needed to fully assess their effectiveness in preventing suicide.

Treatment for suicidal persons with mental disorders, such as schizophrenia and affective disorders, includes both drug and talk therapies. Lithium has been used for more than 50 years as a biochemical treatment for persons with affective disorders (including borderline personality disorder). A meta-analysis of 31 research studies, which collectively covered 85,229 persons, found that the overall risk of suicide among those treated with lithium was 4.91 times less than those not treated with lithium (Baldessarini et al., 2006). A review of 32 of the most comparable and rigorously designed studies (randomized trials) found similar results: 1,389 patients with mood disorders (including forms of depression and manic depression) were randomly assigned into a lithium treatment group and placebo-receiving group. The probability of death through suicide was 74% less in the lithium treatment groups (Cipriani, Pretty, Hawton, & Geddes, 2005). Still, even with lithium treatment, persons with psychiatric disorders had a relatively high suicide rate.

Suicide rates do not vary considerably during the adult years of the life course. However, adults have a much higher rate than children. In turn, midlife male rates are considerably lower than those of elderly males. Within the stage of midlife, however, groups with relatively high suicide risk include persons diagnosed with manic depression or schizophrenia, divorced persons, persons who are demoted in or lose their jobs, persons who migrate long distances, Whites, and males. The average age at suicide is 44. Hence, whereas the elderly have a higher suicide rate, people in midlife account for the majority of suicides in the United States. This social fact is expected to begin to shift as the large cohort of baby boomers enter their retirement years beginning in 2012. As the proportion of elderly approximately doubles over the next generation, the mean age of suicides is expected to be much higher. As a consequence, adults in midlife will account for a lower proportion of suicides than they do at present.

**SEE ALSO** Volume 2: *Life Events; Mental Health, Adulthood; Risk; Stress in Adulthood; Trauma;* Volume 3: *Mortality.*

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***Steven Stack***

# T

## TECHNOLOGY USE, ADULTHOOD

**SEE** Volume 2: *Media and Technology Use, Adulthood.*

## TIME USE, ADULTHOOD

Time is an essential resource in modern life. More Americans say they are concerned about the lack of time than say they are about the lack of money. Benjamin Franklin's adage that "Time is money" has taken on a new meaning, with the advantage of time being that it is equally distributed to everyone (at least in the short term). How a society uses its time provides a behavioral window on its values and attitudes, and time use data identify the important lifestyle changes that occur across the life course, especially as one takes on the social roles of spouse, parent, or other caregiver.

### MEASURING PEOPLE'S TIME USE

One of the challenges in studying how individuals use their time is measuring the use of time. Researchers use a variety of methods to measure time use: direct observation (shadowing), on-site verification, "beeper" studies, and respondent recall or estimates, among others. Prior to the 1960s most information about time use was obtained from surveys that asked respondents to estimate the hours they typically spend on some activity such as working or watching TV. These self-reported measures were often subject to errors in estimation and recall, and this method provided relatively little information on daily activities not included on the survey.

Researchers thus have begun to depend more on the time-diary method, which enables them to assess more precisely the time one spends in all daily activities. More important, time diaries suggest a somewhat different set of conclusions about almost all aspects of daily life (decreased free time, increased sleep, among many others) than research using time estimates or other measures (see Robinson & Godbey, 1999, for evidence of counterintuitive trends in increased free time, childcare, and fitness activity in society).

In the time-diary method, respondents provide complete accounts of what they do on a particular day and for the full 24 hours of that day. Respondents take the researcher step-by-step through their day, describing everything they did from the time they woke up until midnight of that day. The researcher also learns about where people spent their day, whom they were with, and what other activities they were involved in during their main activities (multitasking). Because these data are intended to represent complete accounts of daily activity, diary data can be used to generate estimates of how much societal time is spent on the complete range of human behavior—from work to free time, from travel to time spent at home. Because they are complete, diary data can address most issues about various policy implications of daily activity in society, from the time children spend doing homework, to the amount of sleep people get, to how much they are working long hours.

**Features of the Time Diary** The time-diary approach follows from the first American diary study, done as part

of the most extensive and well-known of diary studies—the 1965 Multinational Time Budget Study (Szalai, 1972). In that benchmark study, roughly 2,000 respondents ages 18 to 64 in urban employed households from each of 12 different countries kept a diary account of a single day, with each day of the week equivalently represented; in subsequent U.S. studies all seasons of the year were covered as well. The purpose of this research design was to ensure that the data truly were a representative snapshot of American life, both during weekdays and weekends, as well as throughout the calendar year.

Respondents using the time diary sometimes have some recall difficulties, but these are small compared to the task of making estimates of past time use over a long time period. The diary keeper's task is to recall all of one day's activities in sequence, which may be similar to the way most people store their activities in memory. Rather than having to consider a long time period, the respondent need only focus attention on a single day (i.e., yesterday). Rather than working from some list of activities whose meanings vary from respondent to respondent, respondents simply describe their day's activities in their own words. The open-ended nature of activity reporting means that these diaries are also automatically geared to detecting new and unanticipated activities (e.g., in past decades, aerobic exercises and use of e-mail, VCRs, and other new communications technologies).

The diary technique also provides respondents minimal opportunity to distort activities in order to present themselves in a particular light. They are not told about a study's interest in one activity or another, because the diary is a simple record of any and all activity. Some respondents may wish to portray themselves as hard workers or light television viewers, but to do so they must fabricate the activities that precede and follow it. Further, a time-diary represents a one-day account, and on any given day respondents likely realize that on a particular day they may work less or watch television more than usual. Moreover, respondents are not pressured to report an activity if they cannot recall it or do not wish to report it.

In sum, the time diary is a microbehavioral technique for collecting self-reports of an individual's daily behavior in an open-ended fashion on an activity-by-activity basis. In this way, the technique capitalizes on the most attractive measurement properties of the time variable, namely:

- All daily activity is potentially recorded and must sum to 1,440 minutes of the day.
- The "zero sum" property of time is preserved, so that if time on one activity increases, it must be balanced out by decreases in some other activity.
- It uses an accounting variable, time, that is maximally understandable to participants and accessible in memory.
- The open-ended activity reporting allows one to detect new and unanticipated activities.

## EARLIER DIARY SURVEYS IN THE UNITED STATES

There have been roughly decade-interval (1965, 1975, 1985, 1992–1995, 2003–2005) time-diary surveys from which to make trend comparisons, although time-diary interviewing has generally moved from face-to-face personal interviews to telephone interviews and from "tomorrow" diaries to "yesterday" diaries (rather than asking participants to keep a leave-behind diary to be filled out tomorrow, asking them simply to recall what they did yesterday).

**1965 U.S. Time-Use Study** In the fall of 1965, as part of a multinational time-use study, the University of Michigan Survey Research Center (SRC) surveyed 1,244 adult respondents, ages 18 to 64, who kept a single-day "tomorrow" diary. The interviewer visited respondents and explained the procedure then left the diary to be filled out for the following day. The interviewer then returned on the day after the "diary day" to collect the completed diary.

**1975 U.S. Time-Use Survey** In fall 1975, the SRC surveyed 1,519 adult respondents and 887 of their spouses, who provided retrospective "yesterday" diaries. These respondents were subsequently reinterviewed in the winter, spring, and summer months of 1976, mainly by telephone.

**1985 U.S. Time-Use Survey** In 1985 the SRC collected single-day diaries from more than 5,300 respondents employing the same basic open-ended diary approach as the 1965 and 1975 studies, using personal, telephone, and mail-back diaries for either yesterday or tomorrow.

**U.S. Time-Diary Collections in the 1990s** Two diary studies were conducted by the SRC by national random digit dial telephone procedures between 1992 and 1995, one with 9,386 respondents and the second with 1,200 respondents. All interviews in both phases used the retrospective diary (or yesterday) method for the previous day. Two further yesterday studies were conducted by the University of Maryland, one in 1998 ($n$ = 1200) and the other in 1999–2001 ($n$ = 978).

**2003–2005 Bureau of Labor Statistics Diary Study** The Bureau of Labor Statistics has collected over 60,000 daily diaries continuously since 2003, using the telephone

## PATTERNS OF TV VIEWING

National trend data in the United States indicate that television has had more of an impact on daily time use than any other household technology and that it continues to account for more than half of Americans' free time. Moreover, time spent watching television has been minimally reduced since the advent of the Internet and other new IT. Early multinational data indicated that television initially drew time away from "functionally equivalent" activities such as movies, radio, and print fiction—and more recently from newspapers. It also appears to have drawn time from activities that are less clearly functional equivalents, such as sleep and grooming (see Robinson & Godbey, 1999).

The main increases in viewing time occurred in the 1970s, apparently related to the availability of color television, although television has made persistent but smaller inroads on free time since that time. As was true in that period, time-diary studies show that less television time is correlated with less time working and traveling, so that people who are at home more do more viewing. Television time has been named as the daily activity people would give up if something urgent occurred.

As shown in Table 1, TV viewing is rated as more enjoyable in "real time" in the diaries than in general, and falls in the middle of other leisure activities. However, Kubey (1992) indicated that was not the case the longer TV is viewed. These quantitative results stand alongside other lasting effects of TV outside of time that have been alleged (at least in the United States). These include (1) decreasing the number of manufacturers and producers, due to the concentration of mass advertising; (2) increasing the fear of crime; and (3) fostering a multitude and democracy of voices that has led to "post modernism." Another cause for concern came from Putnam's (2000) link of TV viewing with long-term declines in social capital in the United States. Other works whose titles give a pessimistic appraisal of TV's effects include Mander's (1978) *Four Arguments for the Elimination of Television* (1977), Postman's *Amusing Ourselves to Death* (1985), and Kubey's *Television and the Quality of Life* (1990). Only the latter is based on actual viewer feedback, finding viewers rated themselves as more passive and using less concentration than for other activities. More upbeat views can be found in Bianculli's *Teleliteracy* (1992), Johnson's *Everything Bad is Good for You* (2004), and Neuman's *The Active TV Audience* (1988), the latter again being the only one based on viewer feedback.

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yesterday method and a more detailed set of activity categories, as described at www.bls.gov.

### TRENDS AND PATTERNS IN TIME USE

Figure 1 shows a list of the 22 main uses of time recorded in prior research on the right and a standard set of predictor variables on the left that are used in studies of time use. In most studies, the activities or uses of time (such as work or TV viewing) are dependent variables, or the behavior to be predicted, whereas the demographic characteristics (such as gender and marital status) are the independent variables, or the predictive factors. Researchers can the assess the extent to which the six categories of background factors can predict the four major types of time: contracted (paid work) time; committed (family care) time (mainly divided into core housework and cleaning, childcare, and shopping); personal care (sleeping, eating, and grooming); and the remaining activities that comprise free time (dominated by TV viewing, which takes up almost half, as noted below).

The predictor variables are grouped into six categories in Figure 1:

1. Birth factors: The factors one is born with (e.g., gender, race, and age).
2. Status factors: The factors that reflect one's social standing (e.g., education, income, and occupation).

| Demographic/ Background Factors | Time Uses |
|---|---|
| BIRTH FACTORS | A. CONTRACTED TIME |
| a) Age | 1. Paid Work |
| b) Gender | 2. Work Commute |
| c) Race | B. COMMITTED TIME |
| STATUS FACTORS | 3. Housework |
| d) Education | 4. Child care |
| e) Income | 5. Shopping |
| f) Occupation | C. PERSONAL CARE |
| ROLE FACTORS | 6. Sleeping |
| g) Employment | 7. Eating |
| h) Marriage | 8. Grooming |
| i) Children | D. FREE TIME |
| LOCATION FACTORS | 9. Religion |
| j) Region | 10. Organizations |
| k) Urbanicity | 11. Social events |
| l) Dwelling type | 12. Visiting |
| TEMPORAL FACTORS | 13. Fitness activity |
| m) Year | 14. Hobbies |
| n) Season | 15. TV |
| o) Day of week | 16. Radio/recordings |
| GEOGRAPHY/CULTURE/ETC. | 17. Reading |
| p) Country | 18. Home communication |
| q) Technology | 19. IT |
| | 20. Rest/relax |
| | 21. Free travel |
| | 22. Total travel |

***Figure 1.*** *Time/Activity categories and their major background predictors.* CENGAGE LEARNING, GALE.

3. Role factors: The various roles one undertakes and performs (e.g., as an employee, spouse, or parent).
4. Location factors: The effects of where one lives (e.g., by region, living in urban vs. rural areas, type of housing).
5. Temporal factors: What year, season, or day of the week is being reported.
6. Geo-cultural factors: Such as the country lived in or access to technology.

Attention to these six sets of factors demonstrates the ways that time use is powerfully shaped by social factors such as life course stage, gender, and access to social and economic resources. In terms of the main trends in U.S. time use since 1965 (the "year" variable on the left side of Figure 1), most notable overall activity increases are found in childcare, TV viewing (see sidebar), and fitness activities. The most notable decreases are found in paid work for men, housework for women (men's housework, by contrast, has nearly doubled), eating, and reading (mainly of newspapers). The main shifts occurred between 1965 and 1975.

There is little evidence in these diaries of other expected changes—even those considered to be common knowledge, such as historical increases in average paid work hours or decreases in free time, childcare, social visiting, relaxing, or (non-newspaper) reading—or of age per se as a major predictor of time. Among the key findings obtained are:

1. Age: Between the ages of 18 and 64, the main age differences are predicted by role factors, such as those due to the increase in housework and childcare that accompany marriage and parenthood. One major shift is the decline in paid work time by those ages 55 to 64, many of whom are taking early retirement. Another is that those under age 30 are going to college in greater numbers than in the past.
2. Gender: The largest shift here is the above-noted activity of housework, whereby men's share increased from 15% in 1965 to 35% today (with the notable exception of laundry). This is part of a larger picture of increased "gender convergence" and "time androgyny," in that women are doing more of the activities that men dominated before, primarily for paid work but also for the former "male" activities involving education, TV viewing, and fitness activity. In contrast, the gender gap in childcare, grooming, reading, and hobbies has declined.
3. Race: Since 1965, Blacks have consistently spent more time in grooming, religion, and TV viewing, whereas Whites spend more time in housework, reading, and visiting. Thus there is little closing of the race gap to parallel the closing of the gender gap. Moreover, the above differences by race are not explained by education or other demographic differences between the races.
4. Education: There is an increasing tendency for a greater number of work hours and less sleep for the college educated, along with higher figures for reading and attending social events (such as the arts or sporting events). By far the most dramatic educational difference is for lower levels of TV viewing among the college educated; the amount of time college-educated people spend watching TV is about half of that for those with less than a high school degree.
5. Income: Differences by income parallel those for education and are often a function of education.
6. Occupation: Again, these differences largely reflect related education differences.
7. Employment: Whether one is currently employed is probably the most significant predictor of time use, particularly as work hours increase. Sleep is the major activity affected; housework and childcare are cut by a third, and TV viewing decreases dramatically as well.
8. Marriage: Getting married also reduces most free-time activities, mainly due to increased housework

and other family care activities (but more for wives than for husbands).

9. Parenthood: Surprisingly, having children has less time effect than getting married, but it still means more housework and shopping and less free time and TV viewing.

The other sets of predictor factors on the left of Figure 1 seem to have much less impact than those above, and those that are found tend be a function of them, such as higher TV viewing in the South due to lower education levels there. Few notable regional differences emerge, nor is there much evidence of a more hectic lifestyle in more urban areas. Outside of less housework among dwellers of apartments or trailers, housing type has little relation to ways of spending time little effect of seasonal differences is found, much as for regional differences that may reflect climatic/weather differences. There are major and obvious differences by day of the week, with weekends meaning decreased work and more time for sleep and TV.

Another primary factor that is often linked to time use is technology. Although the development of so-called time-saving appliances in the 20th century might lead one to believe that time use has changed as a result, the few time studies conducted to date suggest that consumers seem to use their "hassle-saving" features instead—that is, to increase outputs from the technology rather than to save time (Robinson & Godbey, 1999).

**Cross-National Results** Finally, research reveals surprising convergences across most of the more than 30 countries studied (some identified below), although most of them are developed, Western societies in Europe, which can afford to conduct expensive time-diary surveys. For example, Bittman (2000) found similar increases in free time since the 1960s in other countries, much as in the United States. In an analysis of all productive activity (contracted and committed time together) in 12 countries, Goldschmidt-Claremont (1995) found the same basic equality of men and women in overall hours spent on such activities. Another study found the same pattern of increased father childcare across six Western countries since 1990 (France being a notable exception), much as was reported in a 2004 study (Gauthier, Smeeding, & Furstenberg, 2004) for many other countries over this period. Robinson and Godbey (1999) found many similarities in both the trends and predictors of time use in Japan, Russia, and Canada. Gershuny (2000) extended these results to more than 15 other countries.

National trend studies of time use indicate that TV has had a greater impact on daily use of time than any other household technology (see sidebar) and that it continues to consume almost half of free time, at least in the United States. TV use appears to have not been greatly displaced by the Internet and personal computers.

Main gains in viewing time occurred in the United States in the 1970s, coincident with the arrival of color TV, and it has made persistent but smaller inroads on free time since then. As was true in the late 1960s, these diary studies show that lower TV time is correlated with more time at work and more travel and that TV is viewed more by people who are at home and who have more free time. Early casualties of TV, such as sleep and reading, are now correlated with more viewing.

## POLICY ISSUES AND TIME

Because time diaries cover all daily activities performed by individuals in a society, they might be thought to have immense policy implications. However, it is often the case that time itself is less the issue than how the time is used or valued. The "fun meter," displayed in Table 1, shows differences in how people rate the enjoyment they get from various daily activities, when asked on the left-hand column "in real time" (when they were doing it in the diary) or when asked to think about a particular activity in general on the right. Although the two ratings correlate highly, there are exceptions (such as the low rating for TV in general vs. its higher rating in real time, as discussed below and in the sidebar).

For example, in the case of the division of housework between men and women, Table 1 shows that both men and women rate housework low in terms of enjoyment, yet women continue to do twice as much of it. However, it is hard to imagine what type of policy would offset this imbalance, outside of providing counselors to help individual couples to make better arrangements for themselves.The "take back your time" movement (de Graff, 2003) has proposed that American workers stop all paid work after mid-October, so that their total annual work hours would be equivalent to those of European workers. Yet Hochschild (1997) found in one company that it was other workers themselves who sabotaged innovative family-friendly policies to reduce work hours. The National Sleep Foundation has raised alarms about sleep deprivation as a national crisis, although time diaries show no decline in sleep since the 1960—which holds steady at the legendary 8 hours per night. The "turn off your TV" movement has designated one week per year for people to leave their sets off and to instead participate in more potentially gratifying activities. However, Table 1 suggests that, although people rate TV in general as relatively low on the fun meter, the programs they watched on the diary day rated far higher in enjoyment.

**On a Scale from 10 = Enjoy a Great Deal to 0 = Dislike a Great Deal. (1985 and 1975 National Data from Robinson and Godbey 1999, Appendix O)**

| (1985 Diary Average = 7.0) | 1975 General (Average = 6.8) |
|---|---|
| 9.3 Sex | |
| 9.2 Play sports | |
| 8.7 Playing/reading with children | 8.9 Child care |
| 8.5 Church, religion | |
| 8.5 Sleep | 8.6 Play with children |
| 8.2 Meals away | 8.0 Socializing, talking |
| 8.2 Socialize, visit others | 8.0 Work |
| 8.0 Socialize with family | |
| 8.0 Work breaks | |
| 7.9 Reading | 7.5 Sleep |
| 7.8 Meals at home | 7.4 Eating |
| 7.8 TV | 7.4 Washing, dressing |
| 7.4 Hobbies, crafts | 7.3 Church, religion |
| 7.2 Exercise | 7.0 Reading |
| 7.2 Baby care | |
| 7.2 Organizations | |
| 7.0 Work | |
| 7.0 Bathing | |
| 6.6 Cooking | 6.8 Hobbies |
| 6.6 Other shopping | 6.5 Play sports |
| 6.4 Child care | 6.5 Cultural events |
| 6.4 Help others | 6.2 Cooking |
| 6.3 Work commute | |
| 6.1 Dressing | |
| 5.8 Other housework | 5.9 TV |
| 5.5 Grocery shopping | |
| 5.5 Home repairs | 5.1 Home repairs |
| 5.2 Pay bills, financial etc. | 5.0 Organizations |
| 5.0 Yardwork | |
| 4.9 Clean house | 4.6 Grocery shopping |
| 4.9 Laundry | 4.3 Other shopping |
| 4.8 Health care, doctor | 4.2 Clean house |
| 4.7 Car repair | |

***Table 2.*** *Activity enjoyment ratings in time diaries vs. in general.* CENGAGE LEARNING, GALE.

Of all the potential policy issues related to time use, perhaps what is most impressive is the largely anecdotal data on the meager, marginal outputs that workers produce and obtain for their inputs of work time. These data largely suggest that the same work productivity can be achieved with 20 to 50% less time spent on the job (Parkinson, 1962; Schor, 1991; Schuman, Walsh, Olson, & Etheridge, 1985) and that many workers put in simple "face time" to impress their employers.

This inability of diary data to speak to the quality of people's lives and to guide policy to improve that life quality remains the major limitation of time use research and a major area for future studies. The findings reported in Table 1 represent an important first step toward gaining more nuanced insights into time-use statistics, but a new study design—such as a representative ethnography that combines observation with representative sampling (Robinson & Meadow, 1982)—could provide more enlightened insights. Diary data allow researchers to document what people are doing, yet scholars need to find out more about why, with whom, for whom, and to what ends adults are using their time.

**SEE ALSO** Volume 2: *Consumption, Adulthood and Later Life; Housework; Leisure and Travel, Adulthood; Work-Family Conflict;* Volume 3: *Time Use, Later Life.*

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# TRANSITION TO ADULTHOOD

The transition to adulthood is the period in the life course that bridges childhood and adulthood. This transition stage is defined by exits from roles that support and foster childlike dependence (e.g., student), entries into roles that confer adult status (e.g., parent), and the acquisition of stage-specific, developmental skills such as the development of one's personal identity. This stage has been called "demographically dense" (Rindfuss, 1991) because it is defined by a large number of transitions into and out of roles in a relatively short period of time. The transitions are pivotal in individuals' lives, distinguishing it as a stage of life during which individuals are most likely to experience self-described key, turning-point life events that involve family and relationships, education, and work (Elnick, Margrett, Fitzgerald, & Labouvie-Vief, 1999).

Industrialization has influenced the transition to adulthood by increasing society's need for a more highly educated workforce. In turn, in more industrialized countries, education is prolonged and transitions to careers and family roles are delayed. Industrialization has variably influenced the world's nations; in turn, the age span over which the transition to adulthood occurs and the specific criteria that characterize an *adult* vary culturally and historically. This variation principally reflects differences in the degree to which childhood is distinguished from adulthood, the range of opportunities for entry into the labor market, and the availability of resources during this transition stage, in any given culture. In contemporary industrialized nations, this transitional stage spans a wide age range: the later half of the teens, the decade of the twenties, and even into the early thirties. In less industrialized countries, transitions to adulthood are more likely to reflect traditional and homogeneous pathways beginning and ending at younger ages.

## DEFINING AND MEASURING THE TRANSITION TO ADULTHOOD

The transition to adulthood is typically defined by a specific set of role transitions: completing formal education, moving out of the parental home, entering the labor force, getting married, and becoming a parent. These events have a normative sequence; for example, young people are expected to finish their education and establish their work lives prior to marrying or having children. Thus, a "successful" transition to adulthood occurs when an individual completes school, moves out of his or her parents' home, establishes employment, gets married, and becomes a parent (Settersten, Furstenberg, & Rumbaut, 2005).

Yet, individuals' transitions to adulthood are influenced by a range of factors beyond macroeconomic forces, including shifts in the roles of social institutions (e.g., family and schools), social norms, and social values that, in turn, determine and constrain role opportunities. Transition to adulthood experiences vary across individuals in whether or not a role transition is completed, the age at which it occurred, the extent to which it occurred at the normatively expected age, and whether or not it occurred in the normative sequence. Variation in the transition to adulthood also occurs because of personal agency; people act in their own behalf to maximize their well-being, weighing the costs and benefits of choices and options (Schwartz, Côté, & Arnett, 2005).

The role-based definition of the transition to adulthood reflects sociological and demographic perspectives. Psychologists offer an alternative definition of transition from childhood to adulthood. Instead of focusing on social roles, this perspective focuses on the specific life skills that individuals acquire at specific stages of life. Drawing from the developmental theory of Erik Erikson (1950), life span psychologists classically view the stages and ages referred to as adolescence and young adulthood, stages 5 (ages 12–17) and 6 (ages 18–35), as the transition to adulthood. Respectively, during these transitional years individuals are confronted with two challenges—the resolution of one's personal identity and the establishment of intimacy with others. A successful transition to adulthood, therefore, results in a personal sense of self and the ability to simultaneously merge and maintain oneself with another in a love relationship.

Contemporary theorists have expanded the psychological perspective on the transition to adulthood to include a stage between adolescence and young adulthood, "emerging adulthood" (Arnett, 2000). This stage of life is defined by individuals' lack of formal

commitments to social roles. Rather, the stage is defined by psychological markers of adulthood: accepting responsibility for the consequences of one's actions, deciding on personal beliefs and values independently of parents or other influences, becoming financially independent from parents, and establishing a relationship with parents as equal adults (Arnett, 1997). In other words, the developmental task of this age period is gaining self-sufficiency. Therefore, from a contemporary and psychological perspective, the transition to adulthood is a three-stage process through which individuals move at varying rates and with varying degrees of resolution of the respective life tasks associated with adolescence, emerging adulthood, and young adulthood (Tanner, 2006).

The sociological and psychological perspectives differ in their definitions of the transition to adulthood. From a sociological perspective, role transitions are indicators of becoming an "adult." Some empirical research supports this idea. For example, financial self-sufficiency and taking on family roles (marriage and parent) have been associated with feelings of "being an adult." In addition, expectations for taking on adult roles are associated with increasing age through the twenties. The psychological perspective refutes the position that social role transitions are the sole markers of adulthood. This position is supported by studies that demonstrate that only small proportions of people see role transitions as relevant criteria for adult status, while most people favor psychological criteria of adulthood, such as accepting responsibility for self (Arnett, 1997). Still other research suggests that chronological age, the social roles one holds, and psychological gains each contribute to feelings of being adult. However, it is important to highlight that age, roles, and psychosocial maturation are not independent; rather the three are closely intertwined. For example, the number of roles an individual acquires increases with age; and, as age increases, individuals' perceptions of their psychosocial maturity increases, as well (Galambos, Turner, & Tilton-Weaver, 2005).

## HISTORICAL CHANGES IN THE TRANSITION TO ADULTHOOD

The transition to adulthood is different for contemporary cohorts versus prior generations due to changes in the economy and related shifts in social values and norms. The economy defines key dimensions of the school-to-work transition including the types and availability of job opportunities for young people and the education and training requirements for these jobs. In the United States over the past 200 years, the economy shifted from an agrarian to an industrialized economy. In the industrialized nations, economies are increasingly organized around providing services, generating information, and supplying energy. In response, labor market needs increased the demand for a more educated workforce.

The recent macroeconomic reshaping of the labor market has had specific effects on individuals' transitions into adulthood. First, the time between childhood and adolescence has been elongated. Demands for more education prolong young adults' time spent in the student role, delay entry into labor force, and subsequently postpone entry into marriage and parenthood. Second, the traditional sequence of transitioning from student to worker to spouse and parent no longer defines a normative experience. Holding both "student" and "worker" roles concurrently has become more common. Also, trends indicate that there is an increase in out-of-wedlock childbearing and childbearing within cohabiting unions. The extent to which a group of transition-stage individuals are in different roles, experience transitions at different ages, and go through transitions in different sequences determines the heterogeneity of the transition to adulthood in that population, a measure labeled *entropy* (Billari, 2001). Entropy analyses confirm that transitions to adulthood are growing more heterogeneous and that there is variation in entropy across countries (Fussell, Gauthier, & Evans, 2007).

Changes in social values and social norms have accompanied macroeconomic shifts and have also influenced changes in the transition to adulthood (Smith, 2005). In industrialized countries, social values have come to place a greater emphasis on gender egalitarianism, self-actualization, and self-fulfillment. Contemporary cohorts are less religious, less connected to social institutions, and more pessimistic about society and people in general. All together these changes reveal an *individualization* of life pathways and movement away from proscribed, socially sanctioned transition sequences. Current generations also have a different relationship with the economy than prior generations have; both in their own perceptions and in terms of real dollars, current generations fare financially less well than prior cohorts.

## CROSS-CULTURAL VARIATION IN THE TRANSITION TO ADULTHOOD

The contemporary pattern of transitioning to adulthood varies between countries as a function of their economic advancement and other social and political trends. At one end of the continuum, industrialized nations (i.e., United States, Canada, Australia, Japan, and Western Europe) comprise a cluster of countries considered economically advanced and socially and culturally similar. Findings have demonstrated similar entropy patterns across the three countries: very little heterogeneity at ages 17, a quick rise and high heterogeneity through the late 20s, and then a gradual decrease through the late 20s

and 30s. Despite the political, social, and economic similarities in these nations, life course researchers have also detected some differences that reflect the nations' distinctive social values and policies. Transition to adulthood patterns in the United States differ from those in Canada and Australia in that marriage occurs at younger ages, and marriage and parenthood remain more closely tied, perhaps due to higher religiosity in the United States. The result is that the transition to adulthood is less variable and more compressed temporally in the United States than in Canada and Australia (Fussell et al., 2007).

The United States is considered a moderate example of the trend in prolonged and non-traditional transitions to adulthood. European countries with advanced economies are the countries with the longest delays in entries into marriage and parenthood (Douglass, 2007). In Italy a relatively old age at first birth has contributed to a below-replacement level fertility trend, perhaps due to the fact that marriage and parenthood remain closely linked. Additional variation arises between Mediterranean and Scandinavian countries in that, similar to in the United States, Scandinavian youth tend to leave home to live alone or cohabitate with roommates. Young adults in Mediterranean nations leave home later and tend to move in with a romantic partner, commonly with intentions to marry and have children. This one difference explains, to some extent, the increased risk for poverty during the transition to adulthood in countries in which a period of time is spent cohabiting between living with parents and living with a marriage partner. The increased risk for poverty is explained by the decreased likelihood of living with a full-time wage-earner, more common among cohabitors who are more likely to be students or employed only part-time. Comparatively, occupational stability and full-time wage earnings accelerate transitions to marriage and parenthood.

In Latin American countries there is also great variation in transitions to adulthood. In Argentina, a country with a developed economy, the delay in transitions has been observed, but is relatively limited to the proportion of the Argentinian population that can afford a college education and thus experience a delayed entry into the labor force. Independent living is relatively rare in Argentina; the majority of transition-stage individuals who are not married or cohabiting live with their parents or families. Reasons for living with family during the transition-stage are rooted in Latino and Catholic traditions placing high value on family responsibility (Galambos & Martinez, 2007).

Evidence for the broad trends depicting contemporary shifts in the transitions to adulthood varies across Asian countries as well. In China, college students' transitions to adulthood resemble transitions to adulthood in the United States. However, very different patterns are evidenced by Chinese young persons who live in rural villages and/or regions with largely agrarian economies. Agrarian-based economies offer young adults opportunities to enter the local labor market via family- or local-owned businesses, primarily requiring manual labor. Providing young people with employment opportunities that favor manual labor and skill over higher-education affords young people an opportunity to earn a living wage, and thus reduces the likelihood of delay in marriage and parenthood associated with educational attainment (Nelson & Chen, 2007).

In less industrialized countries there is a weaker association between prolonged time spent in education and delays in transitions to marriage and parenthood. In Mexico, for example, there is some evidence of a link between college attendance and delayed entries into marriage and parenthood, but the delays are not as long and the pattern reflects the patterns and behaviors of only a minority proportion of the transition-stage population. The rate of college participation for 16- to 29-year-olds is 25% in Mexico, compared to 55% in Spain, two countries considered close in cultural and social values. Despite the similarities in culture, transitions to adulthood in Spain conform to Mediterranean patterns of late home-leaving and delayed transitions into family formation. In contrast, the average age of home-leaving in Mexico is 18 to 19, followed closely, on average, by transitions to marriage and parenthood. One possible reason for early home-leaving and the lack of postponement of family roles is the lack of a shift toward egalitarianism at the cultural–level that has accompanied industrialization in the United States. The result, despite higher levels of educational attainment, without equality afforded to young women to enter the labor market, women do not delay transitions to family roles to pursue education or careers in their 20s (Fussell et al., 2007).

In non-industrialized countries researchers have found high levels of homogeneity in the timing of life course transitions between mid-adolescence and age 30. In six developing countries—the Dominican Republic, Ghana, Columbia, Kenya, Peru, and Cameroon—there is evidence of increasing levels of educational attainment, yet educational attainment does not fully account for the economic forces that are shaping transitions to adulthood in these countries (Grant & Furstenberg, 2007). In developing nations, the move toward a delayed and varied transition to adulthood is shaped by factors other than educational expansion. As is the case with Mexico, lack of movement toward egalitarian gender roles and lack of a labor market that provides rich opportunities to young people has thwarted delays in marriage and

parenthood (except for a small proportion) despite increasing rates of participation in college.

## WITHIN-CULTURE VARIATION: SOCIOECONOMICS, SOCIAL NORMS AND VALUES, FAMILY RESOURCES, AND CUMULATIVE ADVANTAGE

Within-culture, sub-group and individual-level variation in duration and sequencing of the transition to adulthood exists as a function of access to and involvement in tertiary education and the advanced economy. Within the United States, social class differences have been cited as a key source of variation in pathways through the transition to adulthood. These differences have been observed and reported across countries reflecting different pathways between the middle-class versus working-class, and the college-educated versus high school–educated (Furstenberg, 2008). These observations suggest that the contemporary conceptualizations of transition to adulthood may, at least, neglect the experiences of the poor, less educated, working class.

The labor market currently favors educated young people from higher social class backgrounds, by granting "time off" from labor market participation to build human capital and accumulate education opportunities. In the United States, the half of the population that does not go on to college after high school—the Forgotten Half—not only earn lower salaries when they enter the labor market in their late teens and 20s compared to their college-educated peers, but they also experience slower acceleration in their salaries across their life spans. In addition to the economic inequalities, they miss the normative experiences of the age period that afford freedom from role stress and responsibility if only for a brief period of the life course. Not experiencing a period of being in-between childhood and adulthood for a prolonged period of time may result in different life course pathways for those who delay commitments to adult roles and responsibilities versus those who make commitments early in adulthood, without a period of exploration prior to commitment. For example, it may be the case that spending time exploring a range of professional and personal options during the early adult years before making commitments may lead to better marriage and career choices, and greater preparedness for the parental role. Given the recency of the new transition to adulthood patterns, future studies will be required to test for differences in outcomes associated with different transition to adulthood patterns.

Within countries, sub-groups vary with respect to the access they have to higher education. Across societies, racial and ethnic minorities and non-native born populations typically face the most severe obstacles to high

***Graduation Ceremony at Brown University.*** *A group of Brown University undergraduates cheer as they exit through the Brown University gates prior to Brown's graduation ceremony in Providence, RI.* AP IMAGES.

levels of educational attainment. In the United States, for example, enforcement of Affirmative Action programs decreased in the 1970s and 1980s resulting in large and increasing gaps in educational advancement between whites and African Americans (Corcoran & Matsudaira, 2005). Both high school and college graduation rates are higher for Whites and Asians compared to Hispanic, Black, and Native Americans, resulting in variation in the age of entry into the transition to adulthood.

Sub-group variation also has been attributed to immigration status. Studies of educational trajectories and attainments of immigrant versus native-born students inform our current understanding of processes that may underlie differences in transition patterns between immigrant and native groups. Mollenkopf and colleagues (2005) collected data on a sample of second-generation immigrant and native-born White young adults (i.e., ages 18 to 32) in New York City and surrounding areas. The second-generation immigrants were the children of

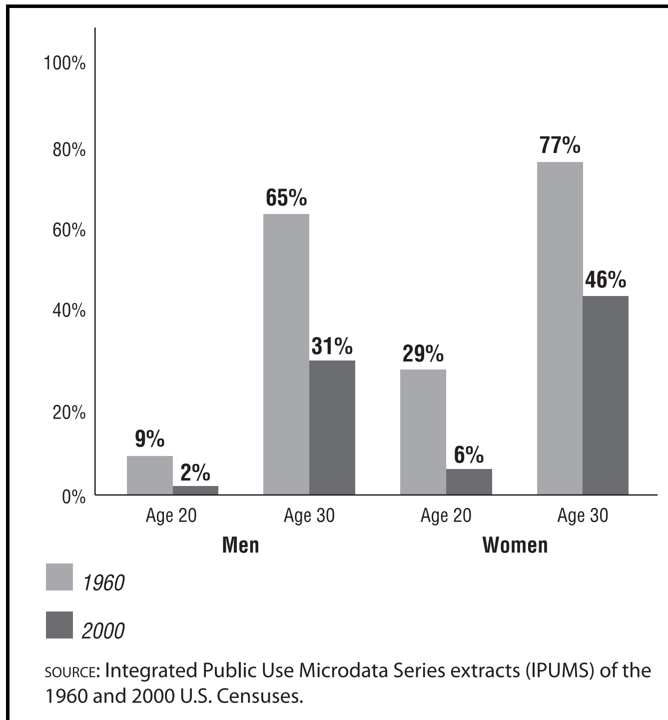


***Figure 1.*** *Percent completing transition to adulthood in 1960 and 2000 using traditional benchmarks (leaving home, finishing school, getting married, having a child and being financially independent).* CENGAGE LEARNING, GALE.

parents who immigrated to the United States after 1965. The research revealed much variation in the rate of college enrollment among these young people; for example, Chinese and Russian immigrants enrolled at higher rates than native Whites. This difference has been attributed to the influence of family value for education attributed to these immigrant groups, manifesting in high parental expectations for achievement, and child adherence to such expectations. Immigration selectivity has also been advanced as a factor leading to these differences; the characteristics of those who immigrate to the United States may be the same factors that lead them to achieve educationally and financially.

Differences between immigrant and native groups of transition-stage adults in the United States are not only reflected in educational attainment, but also in the proportion of each group that makes transitions to marriage and parenthood between ages 22 and 32. As a function of longer periods of time spent as students, the trend demonstrates later ages at marriage and first birth among immigrant Chinese and Russian groups (they are more likely to delay these role transitions). By contrast, Dominican, Puerto Rican, and native-born Black persons made these transitions at younger ages (Mollenkopf, Waters, Holdaway, & Kasinitiz, 2005).

Subjective accounts of "success" in the transition to adulthood vary as a function of sub-culture. Native-born Blacks are more apt to describe success in terms of meeting basic needs, staying alive, staying out of jail, having fun, meeting one's material needs, being the boss (having power), and having stability. In contrast, native-born Whites and Chinese and Russian Jewish immigrant groups—those with higher levels of education and upward mobility—reported that success was realized not only through the attainment of education, career, and money, but also the achievement of higher-order human needs such as awareness of future goals, being happy, being a good person, and making the world a better place (Mollenkopf et al., 2005).

Family support for semi-autonomy plays some role in the prolongation of the transition into adult roles of adult children. One key assumption of the sociological perspective holds that family resources provide a safety net during the transition to adulthood and provide for a period of semi-autonomy during which transition-age youth can extend their role as student and delay adult self-sufficiency (Osgood, Foster, Flanagan, & Ruth, 2005). Parental socioeconomic resources affect the timing of a young person's transition to adulthood (Sandefur, Eggerling-Boeck, & Park, 2005). Parental resources operate both directly and indirectly. First, parents with richer economic resources can contribute to their children's educational attainment directly, by paying for tuition. Second, parental socioeconomic resources affect children indirectly, as parent's social background may affect a child's socialization, peer group, and attitudes toward education—each of which contribute to a child's educational trajectory and, in turn, delayed marital and parental transitions (Osgood, Ruth, Eccles, Jacobs et al., 2005). Socioeconomic differences also may be transmitted through parental expectations for secondary education, which explains some variance in post-secondary attainment (Furstenberg, 2008).

## FUTURE DIRECTIONS

Contemporary studies of the transition to adulthood indicate that, in many countries, the transitions to adulthood are taking longer and are less likely to reflect the "traditional" sequence of role transitions. The growing complexity in young people's pathways to becoming adult reflects an increasingly composite global economy and world. Consistent with these global changes, life course researchers are embracing theoretical frameworks that capture the multidimensionality of the contemporary transition to adulthood. There is momentum across disciplines to establish a more integrated, less disciplinary-divided definition and theoretical frame for study of this salient period of the life course. As new complex frames and methods evolve, studies of macro–micro forces that shape

individual-level transitions, intergenerational and bidirectional shaping of transitions, and integrations of the subjective nature of the transition to adulthood are expected to paint a dynamic portrait of the transition from child to adult (Gauthier, 2007). Some scholars have advocated for a human development framework to integrate multidisciplinary perspectives of the transition to adulthood, and one that bridges theoretical and applied goals (Settersten, 2007; Tanner, 2006).

In sum, the transition to adulthood is a stage of life that, for individuals, varies as a function of a broad range of factors, some macro- (e.g., such as the changing economy) and some micro (e.g., parent financial contributions). For some, the contemporary transition to adulthood reveals great opportunities for growth, development, and the accumulation of resources and attainment of roles. For others, economic and institutional barriers, as well as developmental histories, present challenges to optimizing pathways during these critical years.

**SEE ALSO** Volume 1: *Age Norms; Identity Development; Transition to Marriage; Transition to Parenthood;* Volume 2: *Cultural Images, Adulthood; Fatherhood; Motherhood; Residential Mobility, Adulthood; Roles;* Volume 3: *Age Identity.*

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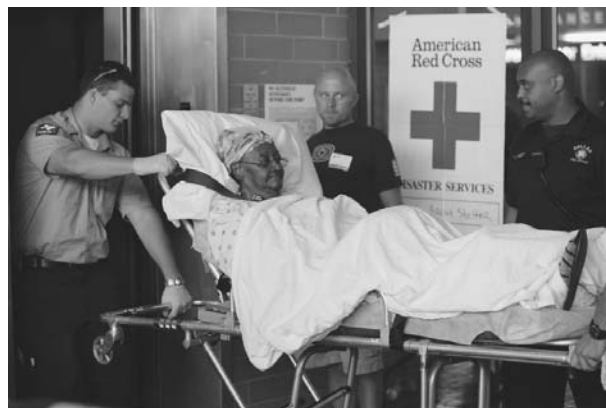
***Jennifer L. Tanner***

# TRAUMA

Trauma is the extreme psychological distress that a person experiences when exposed to severe adversity. Although experiencing trauma is relatively uncommon

for most people over the course of a given day, year, or developmental stage, studies show that the majority of the population experiences trauma at least once over the course of a lifetime. Experiencing trauma can lead to long-lasting, negative consequences for both mental and physical health, yet not everyone who is exposed to trauma suffers equally. The long-term impact of trauma depends on many factors, including the nature of the trauma-inducing event, the developmental stage and coping resources of the person exposed, and the social and cultural context within which the event occurred.




***Refugee.*** *A hurricane Katrina refugee from New Orleans is transported by paramedics to a Dallas shelter. Texans opened their schools, hospitals, and sports arenas to some of Hurricane Katrina's most desperate refugees, offering them a chance to recover from the trauma of the event, regain some normalcy, and decide their next move.* AP IMAGES.

## THE DEFINITION AND DISTRIBUTION OF TRAUMA

The term *trauma* originates from the Greek word for "wound." Whereas physical trauma is defined as a wound to living tissue caused by an external force, psychological trauma is the mental and emotional distress that results from experiencing extremely threatening life events. The distress that is associated with trauma is described as an overwhelming sense of fear, helplessness, or horror. Events, or stressors, that can lead to trauma responses are called *traumatic events*. Traumatic events are distinguished from other stressors by their heightened seriousness or severity. According to the *Diagnostic and Statistical Manual of Mental Disorders* (4th edition) of the American Psychiatric Association (1994), a traumatic event is an experience that involves actual or threatened death or serious injury, or a threat to the physical integrity of self or others. The *ICD-10 Classification of Mental and Behavioral Disorders* of the World Health Organization (1992) refers to a traumatic event as that which is of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone. The term *trauma* is often used to represent both the traumatic event and the initial distress that it causes.

Examples of traumatic events (or traumas) include sudden events, such as exposure to natural or manmade disaster, or witnessing violent crime, as well as events that are more chronic in nature, such as participation in combat or being the victim of physical or sexual abuse or assault (Wheaton, 1996). Traumas also can be characterized by their scope of influence. For instance, some traumatic events, such as natural disasters, affect entire populations simultaneously, whereas others, such as exposure to physical or sexual assault, primarily affect individuals in isolation.

Traumatic events differ with regard to their prevalence. The most common forms of trauma over a lifetime include witnessing someone being injured or killed, being exposed to a natural disaster, and experiencing a life-threatening accident or illness (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Krause, Shaw, & Cairney, 2004). Population-based studies of trauma suggest that the lifetime prevalence of exposure to any trauma among adults is more than 50%, with the majority of those who have been exposed actually reporting more than one type of trauma exposure.

The lifetime prevalence of most of the relatively common traumas is higher among men than women; however, some forms of trauma have higher rates among women, including rape, sexual molestation, and childhood abuse and neglect (Breslau et al., 1998; Kessler et al., 1995; Norris, 1992). Evidence of race differences in the prevalence of exposure to traumatic events is mixed, with some data showing higher rates of most traumas among Whites (Norris, 1992), and other data showing no race differences for most traumas, and higher rates among non-Whites for violent assaults (Breslau et al., 1998). Exposure to violent assaults is also more common among persons of low socioeconomic status (Breslau et al., 1998).

Some age differences in the prevalence of exposure to trauma are also apparent. Not surprisingly, lifetime trauma exposure appears to be positively associated with age for young and middle-age adults (Kessler et al., 1995). Among older adults, however, additional years of life do not appear to result in higher levels of lifetime trauma (Krause et al., 2004). Other studies have estimated rates of trauma exposure by age and have found the highest rates between the ages of 16 and 20 years (Breslau et al., 1998). After age 20, exposure rates tend to decline for most forms of trauma; however, rates are stable and actually increase for some forms of trauma, such as the unexpected death of a loved one and natural disaster (Breslau et al., 1998; Norris, 1992).

## THE LONG-TERM IMPACT OF TRAUMA

Virtually everyone exposed to a traumatic event experiences some degree of distress in the immediate aftermath (O'Brien, 1998). This trauma response typically entails intense feelings of fear and helplessness arising from the appraisal that one's life or sense of self has been fundamentally threatened (Resick, 2001). Following this immediate response, however, most people are able to cope effectively and recover satisfactorily. Nevertheless, for a substantial number of people, the distress caused by a traumatic event lingers and can lead to the development of mental, as well as physical, health problems over the life course.

The vast majority of studies of the long-term impact of trauma focus on mental health problems. The mental disorder most commonly associated with trauma is posttraumatic stress disorder (PTSD). PTSD is a pathological stress response syndrome with symptoms that include (a) "re-experiencing" the traumatic event through flashbacks and nightmares, (b) avoidance of stimuli associated with the trauma and a numbing of responsiveness, and (c) excessive arousal (American Psychiatric Association, 1994). In order to meet the threshold for a PTSD diagnosis, these symptoms must persist for at least one month and must cause "clinically significant" impairment in social functioning. In adults, estimates of the prevalence of PTSD among those exposed to a traumatic event range from 8% to 20% (Breslau et al., 1998; Kessler et al., 1995).

Other mental disorders that are associated with exposure to traumatic events include substance abuse, depression, and anxiety disorders. Often, these disorders co-occur with PTSD. Kessler and colleagues (1995) estimated that 79% of women and 88.3% of men with PTSD have at least one other mental disorder.

A growing number of studies have also raised the possibility that trauma has adverse long-term effects on physical health (Krause et al., 2004; Shaw & Krause, 2002). Data from these studies show significant associations between exposure to traumatic events earlier in the life course and subsequent physical health outcomes such as poor self-rated health, acute and chronic illnesses, and functional disability. At least two possible explanations for these associations have been proposed. First, exposure to trauma may impair one's psychosocial resources, such as personal control beliefs and social support, which themselves are strong determinants of physical health (Shaw & Krause, 2002). In addition, exposure to trauma may lead individuals to engage in negative health-related behaviors—such as smoking, substance abuse, or poor weight management—in attempts to cope with the ongoing distress associated with a trauma (Irving & Ferraro, 2006; Resick, 2001).

## FACTORS INFLUENCING THE IMPACT OF TRAUMA

A particular event is traumatic only to the extent that victims appraise the event as extremely threatening (Van der Kolk, McFarlane, & Weisaeth, 1996). Therefore, it is one's interpretations of the meaning of an event that largely dictate its long-term impact. Characteristics of a traumatic event that may influence its interpreted meaning, and thus its long-term impact, include its perceived intendedness and whether the victim is oneself or another person. For example, Kessler and colleagues (1995) found that events that are natural (e.g., natural disasters), unintentional (e.g., accidents), and impersonal (e.g., witnessing death or injury) are less strongly associated with PTSD than are events involving intentional interpersonal violence (e.g., combat, rape, and physical abuse). Therefore, it appears that events that cause people to perceive themselves as deliberate victims may have a stronger long-term impact than events involving immediate harm to others or events that are perceived to be natural or accidental.

Other determinants of the long-term effects of a traumatic event involve characteristics of the victim. Figuring prominently in this regard is the victim's stage in the life course. Both the stage in the life course at which a victim was originally exposed to a trauma, as well as a victim's current life course stage, are important to consider. Research findings regarding which life course stage is associated with the most harmful impacts are somewhat equivocal. Many investigators believe that exposure to trauma during childhood is especially harmful (Irving & Ferraro, 2006; Shaw & Krause, 2002). This is because childhood is viewed as a particularly vulnerable developmental stage, when the foundations for key psychosocial resources that are essential for effective functioning in adulthood, such as perceptions of control over one's environment and the ability to form and maintain meaningful and supportive social relationships, are being developed. The feelings of helplessness and insecurity caused by traumatic events could permanently impair the development of these key psychosocial resources.

Despite evidence of the strong and enduring negative consequences of childhood trauma, however, other research suggests that exposure to trauma at other stages of the life course may be even more damaging. In particular, research by Krause and colleagues (2004) found that traumatic events encountered during young and middle adulthood (i.e., between the ages of 18 and 64) exert the greatest negative effects on health. However, this research does not indicate whether the greater level of harm

caused by trauma encountered during these stages is due to something characteristic of these developmental stages or to the particular types of trauma that are likely to be encountered during these stages.

Trauma encountered during old age does not appear to be associated with negative health outcomes. This may be because the extensive life experience of elderly individuals better prepares them to anticipate and cope with the consequences of a traumatic event.

A person's stage in the life course is also important for understanding the long-term impact of trauma because the interpreted meaning of a traumatic event is likely to evolve over time. For instance, the impact of trauma encountered during childhood may not be apparent until much later in the life course because a child may not have the cognitive capacity or life experience to fully appreciate how threatening an event actually was until adulthood. Furthermore, the developmental stages encountered during late life may also influence the effects of trauma encountered many years earlier. For example, many people, as they enter old age, consciously strive to evaluate, integrate, and make sense of the experiences they have encountered over the course of their lives. In the process, they may learn to reconcile or overcome the negative effects of earlier trauma by reaching an understanding of the experiences they have had, and perhaps even forgiving the perpetrators of their traumatic experience. Alternatively, during these final stages of life, some traumatic experiences that have not been effectively coped with previously may resurface and lead to a reoccurrence, or delayed onset, of posttraumatic disorders (Aarts & Op den Velde, 1996).

Finally, the social environment surrounding a trauma victim also influences the long-term impact of the event. For example, the meaning attached to a particular event is heavily influenced by social context. This is evident from changes in the ways in which American society has viewed the use of physical force as a form of discipline by parents. Over the course of the last century, Americans have progressed from viewing corporal punishment as normative and morally sanctioned to viewing it as abusive and condemning it. Therefore, older cohorts who were exposed to childhood physical abuse may have interpreted these events differently than do younger cohorts, and this may influence the long-term psychological impact of such an event (Shaw & Krause, 2002).

Factors in the social and cultural environment are also important for the recovery process. Strong and supportive relationships with others are thought to be a primary defense against the negative long-term effects of trauma (van der Kolk et al., 1996). In addition, the presence of cultural rituals for coping with some forms of trauma (e.g., funerals) are also helpful in the recovery process.

## CURRENT RESEARCH AND POLICY ISSUES

Despite the tremendous growth in recent decades in knowledge regarding psychosocial trauma and its potential long-term effects, more research is needed. Exposure to traumatic events is an inevitable part of life. However, the more that is known about how people respond to trauma, the more effective societies will be at promoting healthy recovery.

Several specific issues are high priorities for future research. First, most studies focusing on trauma have been limited to mental health outcomes of traumatic events, such as PTSD and depression. Further examination of the extent to which trauma leads to physical health problems, and how exactly exposure to trauma affects physical health, is greatly needed. Second, although researchers have begun to examine the effects of multiple exposures to trauma throughout the life course (Breslau, Chilcoat, Kessler, & Davis, 1999; Turner & Lloyd, 1995), further investigation into the joint and cumulative effects of multiple exposures to trauma at different points in the life course is critical. Third, a relatively new area that is ripe for further examination is posttraumatic growth. A growing body of research has revealed that for many individuals, the process of struggling with extreme adversity actually leads to improved functioning (Linley & Joseph, 2004). Nevertheless, it remains unclear how common such growth is or what factors are likely to facilitate it. Finally, research is needed to better understand the public health impact of large-scale traumas that affect entire groups of people simultaneously, such as natural disasters, wars, and terrorist attacks. More research is needed to better predict who in the population is most vulnerable to trauma-induced mental and physical health problems in the wake of such events.

Current policy challenges related to trauma involve devising ways to prevent posttraumatic illnesses among those who are exposed. Because exposure to many traumatic events is unavoidable, prevention policies that focus on secondary, rather than primary, prevention are likely to be most productive. For example, policies are needed to ensure that those who must be exposed to trauma (e.g., emergency response personnel) are adequately trained. In addition, following exposure to traumatic events, early intervention with efforts to stimulate healthy coping is thought to be effective at limiting long-term damage. Therefore, policies that reduce barriers to seeking mental health treatment and otherwise facilitate early intervention programs for those who are exposed to trauma are greatly needed. This may be especially true in developing countries that currently lack the critical resources needed to launch extensive prevention efforts but whose rates of exposure to many traumas (e.g., disasters) far surpass those in developed countries (Van de Kolk et al., 1996).

**SEE ALSO** Volume 1: *Child Abuse; Resilience;* Volume 2: *Crime and Victimization, Adulthood; Domestic Violence; Life Events; Mental Health, Adulthood; Stress in Adulthood;* Volume 3: *Elder Abuse and Neglect; Stress in Later Life.*

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***Benjamin A. Shaw***

# U-Z

## UNEMPLOYMENT

Individuals are officially defined as unemployed if they are seeking paid work but are unable to find a job. The unemployment rate is obtained each month from the Current Population Survey of U.S. households, conducted by the Bureau of Labor Statistics. The official unemployment rate is computed by dividing the number of people unemployed during a survey week by the total number of people employed and unemployed during the same week (excluding those under 16 years of age, institutionalized persons, and persons on active duty in the armed forces). The denominator is referred to as the civilian labor force; thus the unemployment rate shows the fraction of the labor force that is unemployed, not the fraction of all people who are unemployed.

### UNDEREMPLOYMENT

The unemployment rate is usually considered to be an underestimate of labor market weakness because it does not include people who are underemployed in one of three ways: (a) those who are employed only part-time when they need and desire full-time employment; (b) those who are employed at a low-paying job that requires less skill or training than they possess; and (c) those who have become discouraged workers because of a lack of job opportunities, training opportunities, or services that enable them to work, such as child care and public transportation. Such difficulties lead them to accept economic inactivity rather than to register as unemployed or actively seek jobs because their prospects for regular employment appear to be bleak. Members of the first two groups are included in the labor force, but not counted as unemployed; members of the third group are not counted as a part of the labor force, because actively seeking a job is required for them to be considered unemployed in official statistics.

### EXPANDED MEASURES OF LABOR UNDERUTILIZATION

Policy-makers and the public-at-large would benefit from having greater knowledge of the full extent of the level of underutilization of people who are available for work. It is widely acknowledged that the official unemployment rate understates the number of persons who are negatively affected by labor market conditions, and that it is not the best estimate of the nation's economic health. For example, it is likely that in inner city areas with limited job opportunities, the number of discouraged workers is higher among young minority men (Wilson, 1996). The monthly publication of a single unemployment rate fails to report on the rates for different age and racial and ethnic groups, the number of part-time workers who desire full-time jobs, and the duration of unemployment that is experienced. The 2006 Bureau of Labor Statistics, as reported in Nelson (2007), provides six alternative measures of labor underutilization that should be reported along with the official unemployment rate; they include the addition of discouraged workers, involuntary part-time workers, and marginally attached workers (see Figure 1).

### CROSS-NATIONAL COMPARISONS OF UNEMPLOYMENT

The unemployment rate is often used as an indicator of a nation's economic health. The U.S. rate is often compared

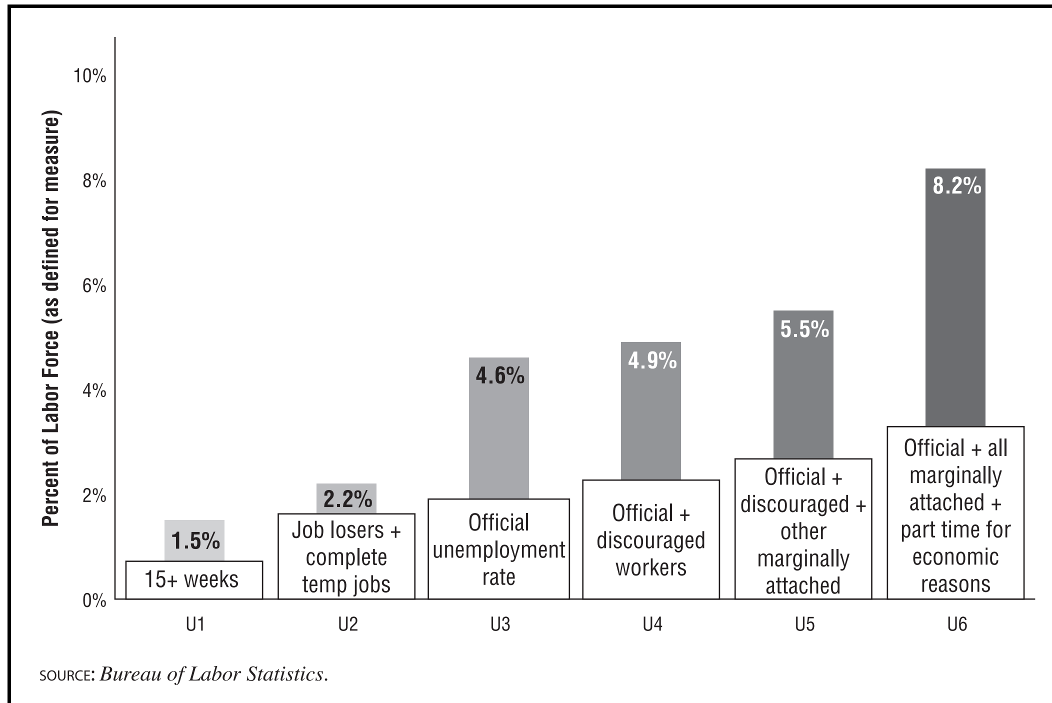


***Figure 1.*** *Alternative measures of labor underutilization, United States 2006.* CENGAGE LEARNING, GALE.

with that of the industrialized countries of Canada, Australia, Japan, France, Germany, and Italy. Since 2001 the United States has had a relatively low rate, coming in either second to Japan, or third behind Australia. The highest rates are for Germany and France. In all these countries, highest rates are for teenagers (Bureau of Labor Statistics, 2007a).

## U.S. DEMOGRAPHIC GROUP COMPARISONS

In the United States unemployment rates are calculated for several demographic groups, enabling subgroup comparisons. While unemployment characterizes all age groups to some extent, it is highest for teenagers and young adults aged 20 to 24 years. The unemployment rate is lowest for adults aged 45 to 55 years. In general, women have lower rates than men, but married women have higher rates than married men. With respect to race and ethnicity, Whites have the lowest unemployment rates, followed by Asian Americans, Hispanic or Latino Americans, and African Americans (Bureau of Labor Statistics, 2007b). These differentials are due to a number of factors, such as educational level of each group and job opportunities in area of residence (Wilson, 1996).

## CAUSES AND GENERAL EFFECTS OF UNEMPLOYMENT

Unemployment rates largely reflect the workings of a market economy, especially technological changes in industrial production and corporate reorganization or relocation to minimize costs. It is the unemployed workers, however, who experience income loss, anxiety, reduced self-esteem, loss of social contacts, heightened smoking and alcohol use, lower quality nutrition, postponed health care, family conflicts, and illness.

## EFFECTS ON HEALTH

Extensive research has been conducted on the health impact of economic downturns and unemployment (Perrucci & Perrucci, 1990). Research based on state and county unemployment rates and its effects reveals a relationship between economic downturns and aggregate rates of negative health symptoms. Research focused on the link between unemployment and health has been conducted on both broad, general samples of unemployed workers as well as on workers displaced by specific plant closings. For general samples of unemployed workers, studies conducted at one point in time and studies that take repeated measurements across time demonstrate the development of mild levels of distress or increases in levels of psychological distress subsequent to unemployment.

Workers who have been displaced by a specific plant closing in a community experience greater health impacts than workers drawn from a general sample of unemployed persons (Perrucci & Perrucci, 1990). The difference is probably because of (a) the impact that a plant

closing has on a community's economy, reducing the chances for reemployment; (b) longer periods of unemployment for workers in a depressed local economy; and (c) greater economic strain resulting from longer periods of unemployment.

## EFFECTS ON FAMILIES AND COMMUNITIES

Families with unemployed members have significantly lower marital adjustment, poorer marital communication, and lower satisfaction and harmony in family relations. Also, children whose fathers are unemployed are more likely to experience infectious disease as well as illness of longer duration in comparison with children whose parents are continuously employed. Even for continuously employed fathers, children whose fathers feel considerable job insecurity are more likely to experience illness than children whose fathers feel very secure in their work positions, suggesting that the anticipation of joblessness affects health (Margolis and Farran, 1981).

The effects of unemployment can reach beyond the individual worker to affect entire communities in situations where tax revenues are reduced and needs for additional public social expenditures increase. Several case studies of unemployment indicate that the loss of economic security usually adversely affects the social cohesiveness of communities as the unemployed workers lose faith in the economic system and become dependent, precluding redevelopment of their communities. Cutbacks in public services, such as education and police protection, reduce quality of life and impair the community's ability to attract new families and new employers.

## GAPS IN RESEARCH KNOWLEDGE

Research on the way in which unemployment affects health points to three explanatory factors: First, and perhaps most important, is income loss and the threat to future financial security; second, is the loss of meaningful work and self-esteem; third, is the lack of social support from friends, kin, and community. These factors have been studied in the context of the stress process. Learning more about who is vulnerable, when in their lives they are vulnerable, and why some vulnerable people become resilient in the face of stress is an agenda for future research (Broman, Hamilton, and Hoffman, 2001).

## UNEMPLOYMENT AND POLICY CONSIDERATIONS

Unemployment is an economic problem and much more. Its impact on individuals, families, and communities results in human and social costs that require a public response. A consideration of the nature and effectiveness of current public policy on unemployment and assumptions about patterns of economic change in the future also encourage a policy response.

Current policy assumes that unemployment is a normal and unavoidable cost of a growing, changing economy operating in a free market. A growing economy requires change, and change leaves behind those individuals who lack the needed human capital (education and skills) and those firms that cannot compete in the marketplace. The challenge is how to get corporations to accept some of the costs of unemployment that now jeopardize workers and their communities.

There is evidence that current unemployment insurance and severance pay or continuing job-related fringe benefits, especially health insurance, is inadequate for most displaced workers. Also, when unemployment occurs during a recession, or by plant closings by a major employer in a small community, there is also a decline in the availability of community resources to assist displaced workers. Current policy attempts to assist those whose jobs have been moved overseas through the Trade Adjustment Act of 2002 and Title III of the Job Training and Partnership Act of 1983, but both serve relatively few displaced workers. And as corporations continue to move or initiate operations abroad, workers will experience job insecurity as well as loss.

There are at least four general policy initiatives that could be considered. First, a policy initiative should be job-centered, with a focus on creating and maintaining jobs through stronger federal legislation to place the human and social costs of unemployment at the center of economic decision-making. Companies should be required to provide sufficient reason in closing their plant(s) before federal permission is granted to do it, particularly if the closing would devastate the individuals and communities involved.

A second policy initiative should expand unemployment benefits available to displaced workers, and it should set uniform standards for states to follow to deliver benefits. These benefits would be particularly effective if combined with an adequately funded program that coordinates job retraining and relocation expenses.

A third policy initiative should provide social services to unemployed workers and their families while they are participating in retraining and relocation programs. Such assistance would help workers to better cope with job loss, and it would help spouses and other family members to obtain advice, training, and agency referrals to help the entire family deal with unemployment.

Fourth, as the creation and export of jobs overseas continues, the federal government should undertake a jobs program, implemented through state and local governments, to hire the unemployed into meaningful and valued jobs in communities across the country. These workers

could assist with vital community services in underserved areas of education, health care, and other community-based services, while benefiting from gainful employment and a sense of contributing to the community.

**SEE ALSO** Volume 2: *Careers; Policy, Employment;* Volume 3: *Retirement.*

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## UNIVERSAL HEALTH INSURANCE

**SEE** Volume 2: *Policy, Health.*

## VOLUNTEERING, ADULTHOOD

Volunteering is a form of altruistic behavior. Its goal is to provide help to another person, group, organization, cause, or the community at large, without expectation of material reward. Volunteer work is not to be confused with informal helping, which is unpaid service people provide on a more casual basis, outside of any organizational context, to someone in need, or care work, which is normally associated with kin relations and consists of face-to-face help provided to an individual toward whom one feels some kind of social responsibility. Volunteer work does, however, include advocacy, which is a form of service that is very close to social activism. Advocacy organizations seek to influence the outcomes of public or private decisions on issues that affect the fortunes of the organization's clients or broader constituencies.

When people think of a volunteer, they almost always imagine someone who is making a sacrifice to help another person, an organization, or a cause. Although most people agree that individuals can benefit from their volunteer work, they must not volunteer for the purpose of gaining those benefits and would, it is assumed, continue to volunteer even if those benefits disappeared. In the public mind, then, volunteer work is not simply unpaid labor but unpaid labor performed for the correct reason. *Good works* are inspired by virtues such as generosity, love, gratitude, loyalty, courage, compassion, and a desire for justice: any benefits are a byproduct.

According to social surveys, just over a quarter of Americans age 16 years or older will have volunteered at some point in the past 12 months, but the likelihood of having done so and the specific volunteer activity in which they engage vary considerably across social groups. Volunteers tend to be more highly educated (about 20% of high school graduates volunteer compared with 43.3% of college graduates); they are more likely to be White, female, working part-time, married, parenting school-age children, and frequent church-goers. Some people volunteer just a few hours in the course of the year, whereas others contribute several hours a week steadily; the latter group is composed disproportionately of those who are not in the labor force, such as homemakers, students, and retirees (U. S. Bureau of Labor Statistics, 2006).

Volunteerism is more common in the United States than most other advanced industrial societies, mainly because of the religiosity of the American people. A comparison of two otherwise quite similar countries substantiates this argument. The volunteer rate in the United States is higher than the rate in Canada. After country-level differences in frequency of attendance at religious services are controlled, however, the Canadian rate exceeds that of the United States. The same could be said for Sweden and Norway because they, too, have higher rates of volunteering than the United States after frequency of religious services attendance is controlled for. This is because much of the volunteer work in the United States is performed on behalf of religious organizations (Curtis, Baer, & Grabb, 2001).

## VOLUNTEERING OVER THE LIFE COURSE

Life-course patterns in volunteering are quite evident in Figure 1, which uses Current Population Survey data from 2006 (U.S. Bureau of Labor Statistics, 2006). The columns show the percentage of each age group who volunteered at all during the previous 12 months.

Life-course variation in the number of hours volunteered among those who volunteer follows a different pattern: The number of hours volunteered per year is highest among those age 65 or older, followed by those age 55 to 64 years. Volunteers between 16 and 34 years contribute the fewest hours.

**Teenagers and Young Adults** Teenagers are often portrayed as rather self-centered, preoccupied with material possessions, and uninterested in community affairs, political activities, or helping others. In addition, many of the voluntary associations that sponsor and organize volunteer work are relatively inhospitable to teenagers, the one major exception being religious organizations. The teenage years would therefore appear to be a wasteland as far as volunteerism is concerned. In the United States, at least, teenagers show considerable interest in volunteering mainly because schools, churches, and other youth-oriented institutions encourage or, in some cases, require community service of their young people. Numerous studies show that the habit of volunteering tends to be passed from one generation to another. The mother's volunteering is more influential than the father's, due partly to her greater efforts to integrate her children into her own activities and partly to the fact that she is more likely to volunteer for child-related activities than the father (Wuthnow, 1995).

By volunteering early in life, people acquire experience and skills that establish the groundwork for volunteering in later life. In many respects, middle-age volunteers are simply young volunteers who have aged. From a human development perspective, it is no surprise that adult volunteers are more likely to say they volunteered in youth. However, young adults in their early 20s experience the time-pressure of multiple commitments and engage vigorously in a wide variety of leisure-time pursuits—a lifestyle not normally associated with doing volunteer work and this stage of the life course tends to mark a low point in volunteering.

The most popular form of volunteering among younger Americans is in connection with youth development organizations, followed by civic and community groups and environmental organizations. They are less interested than are older people in working in connection with a church (Lopez, 2004). Although young people are less interested in more routine forms of advocacy volunteering, they turn out in greater numbers for the kind of "high-risk activism" associated with protest movements. They are more available for this kind of work (their free time is relatively plentiful, social obligations are few, and, for those in school or college, work commitments are flexible), but the thrill of risky volunteering, which appeals to young people, should not be overlooked. They are also more likely than older people to take on high-adrenalin work, such as search and rescue or emergency squad volunteering.

**Forming a Family** Most Americans get married for the first time in their 20s. When looking at the possible influence of marriage on volunteering, it is important to bear in mind the several different ways people can be single. Compared with married people (and controlling for age), those whose spouses who have died are the least likely to volunteer, followed by those never married and those who are divorced or separated. Significantly, when frequency of religious service attendance is controlled for, the positive effect of marital status disappears, probably because marital status is associated primarily with volunteering in connection with a religious organization (Musick & Wilson, 2008).

Married couples tend to behave similarly when it comes to volunteer work: Freeman (1997) found that 59% of men married to women who were volunteers were volunteers themselves, compared with only 10% of men married to women who were not volunteers. Seventy percent of women married to men who volunteered were volunteers themselves, compared with only 16% of women married to men who did not volunteer. Furthermore, respondents married to spouses who volunteered contributed more hours than respondents married to spouses who did not volunteer (Hook, 2004).

**Who Has the Most Influence?** Spouses have a reciprocal positive effect on each other's volunteer hours; this influence is stronger when spouses are volunteering in the same domain, and the influence of the wife is stronger than the influence of the husband. Interestingly,

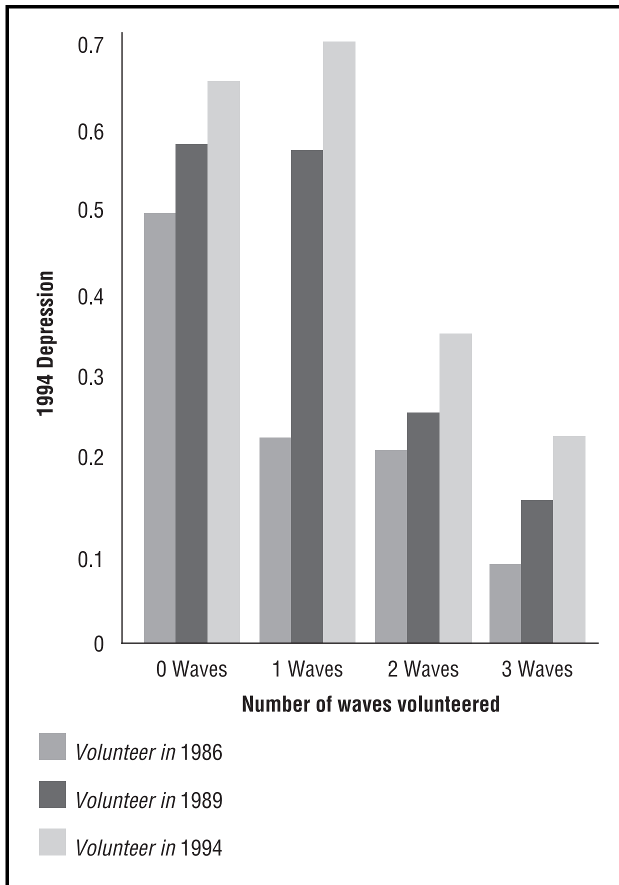


***Figure 1.*** *Percentage of each age group who volunteered at all during the previous twelve months, 2006.* CENGAGE LEARNING, GALE.

unmarried couples living together (i.e. cohabiting) have *no* influence on each other's volunteer behavior (Rotolo & Wilson, 2007).

**Volunteering with a Spouse** Spouses clearly influence each other's volunteer behavior, but it does not necessarily follow that they volunteer together. One survey found that remarkably high proportions of married volunteers (41.4%) were accompanied by their spouses. Husbands were more likely to say they had volunteered with their spouses than wives did. Surprisingly, the tendency to volunteer together did not increase with age. Among the married couples who were volunteering, frequent church-goers were most likely to be volunteering together (Musick & Wilson, 2008).

**Becoming Parents** Newly married couples tend to have low volunteer rates, but this is mainly due to the fact that any children they have are young and that young children inhibit their parents' ability to do much outside the household other than paid work. After they reach school age, however, children act as a social magnet for their parents, drawing them into a wider range of activities outside the home, including volunteer work. Parents of school-age children have a stake in maintaining organizations and activities that cater to their children and that, as individuals, they could not provide on their own, such as sports teams and scout troops.

The influence of children on their parents' volunteering is felt most keenly by mothers, who bear most of the responsibility of looking after children. According to Current Population Survey data, both mothers and fathers are more likely to volunteer if their children are between 6 and 13 years of age—and this pattern does not vary based on gender of the child. Compared with findings in parents of children ages 2 years or younger, parents of children between 6 and 13 years of age are much more likely to volunteer—but mothers are especially likely to do so. The influence of children ages 14 to 17 years on educational volunteering is also stronger for mothers than fathers. Both mothers and fathers of children ages 2 or younger are less likely to volunteer than married couples who have no children, but the deterrent effect is stronger for mothers than fathers (Musick & Wilson, 2008). In short, gender makes a difference regarding the influence of children on volunteering: Young children deter their mothers more than their fathers and school-age children involve their mothers more in volunteer work than their fathers.

Parental status and the gender of the parent also make a difference as to what the volunteer does. The Current Population Survey asks volunteers to report their main activity or job as a volunteer. For example, only 5.5% of men without children volunteered as a coach or referee compared with 18.9% of men with children younger than 18, but their volunteer rate for this activity was nevertheless higher for women whether they have children under 18 (4.2%) or not (1.8%).

The positive influence of school-age children on volunteering in midlife is conditioned by available free time. Full-time workers find it more difficult to volunteer than part-time workers; women with part-time jobs are more likely to volunteer and volunteer more hours than women working full-time, especially if they have school-age children. Full-time work, however, lowers the probability of volunteering and the number of hours volunteered but less so for mothers with school-age children (Musick & Wilson, 2008).

**Volunteer Work in Later Life** People become steadily less likely to volunteer as they enter old age and volunteer for fewer organizations. However, the hours contributed by each volunteer increase until he or she enters the ranks of the *oldest old* (75 years of age or more). According to

2006 Current Population Survey data, among those who volunteer at all, the median annual hours is highest (104) for the over-65 age group and lowest for 25- to 34-year-old age group. This age profile is found in most industrialized societies that gather such volunteer data. Interestingly, older people (i.e., those 65 years old and older) are somewhat more likely to say they became a volunteer by approaching an organization (43.4% compared with 40.8% of volunteers as a whole). Although this difference is small, it suggests that older people are more likely to take the initiative as a way of finding rewarding activities in their old age.

As far as volunteer preferences are concerned, older people favor volunteer activities in which they can help on a one-to-one basis and see the fruits of their labor immediately. Not surprisingly, older people are also drawn to volunteer work that targets other older people. In the 2006 Current Population Survey data, religious volunteering was the most popular choice among older people. Age also positively influenced volunteering for social and community service organizations, health, civic, political, and professional organizations. However, people older than 65 were less likely than younger people to volunteer for education or youth services, environmental or animal care organizations, and public safety organizations (U.S. Bureau of Labor, 2006).

**The Effect of Retirement on Volunteering** Many Americans plan to take up volunteer work in their retirement. The data suggest, however, that continuity is the predominant pattern: People tend to maintain the habits they had before retirement, but they modify them in light of their new circumstances. If they volunteered in middle age, they volunteer in old age and, in all likelihood, increase the number of hours they contribute. If they did not volunteer in middle age, they are unlikely to take it up when they retire. Those who do begin volunteering after retirement are more likely to be White, highly educated, in good health, and, above all, strongly religious and married to a spouse who is also volunteering (Zedlewski, 2007). Much also depends on what retirement means for the person: Older people who have fully retired volunteer the most hours, followed by older people who have retired but returned to work, followed by full-time workers who have not yet retired (Musick & Wilson, 2008). Once again, the interweaving of influences from several life domains—a hallmark of life-course analysis—helps shape the amount and direction of volunteer work.

## THE BENEFITS OF VOLUNTEERING

A growing body of research indicates that volunteering is good for the physical and mental health of the volunteer. Volunteers have lower early mortality rates, possess greater functional ability, and are less likely to feel depressed. Up to a certain point (around 100 hours per year), more volunteer work means more positive health outcomes. Long-term volunteers also seem to enjoy more benefits. For example, an analysis of the American Changing Lives data over three waves (1989, 1992, and 1994) showed that respondents who volunteered in all waves had fewer depressive symptoms than those who volunteered only once (Musick & Wilson, 2003). From a life-course perspective, it is interesting that older volunteers receive the greatest mental health benefits from doing volunteer work, no doubt because it provides them with physical and social activities and a sense of purpose at a time when they are losing social roles. It is also likely that older volunteers have more discretion over their volunteer work and contribute more of their volunteer time to religious organizations, both of which increase the likelihood of positive health benefits (Musick & Wilson, 2003).

## POLICY

In the United States and other countries, such as Canada, the United Kingdom, and Australia, it is official government policy to promote volunteerism. Governments have come to regard volunteer work as a valuable adjunct to publicly provided services such as education, recreation, health care, and social services and an important stimulus for wider engagement in the community through political and civic organizations. In 1993 the United States established the Corporation for National Service to coordinate federal and state organization and promotion of volunteerism. Among the initiatives pursued by the Corporation are Senior Companions, to encourage volunteer work among the elderly, and Americorps, to engage teenagers and young adults in helping others. Service-learning curricula, in which high school students perform community service in return for academic credit, have recently spread throughout the United States, their aim being not only to improve educational quality but also to encourage a long-term commitment to helping out in the community.

**SEE ALSO** Volume 2: *Fatherhood; Motherhood; Political Behavior and Orientations, Adulthood; Religion and Spirituality, Adulthood; Social Integration/Isolation, Adulthood; Social Movements; Time Use, Adulthood.*

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***John Wilson***

# WORK–FAMILY CONFLICT

Work–family conflict (WFC) refers to the situation in which the responsibilities and expectations of an individual's work roles interfere with the performance of his or her family roles—or vice versa. The work–family literature has burgeoned in the wake of large numbers of women and mothers entering the workforce since the 1970s. This research, which is based largely on the scarcity principle that individuals have finite resources that become overtaxed by multiple role responsibilities, takes one of two broad approaches. The first approach focuses on specific manifestations of WFC, as when employment or job characteristics interfere with specific family activities such as parenting or marital quality. The second approach focuses on experiences of WFC more broadly and the putative causes and consequences of these generalized experiences. This entry focuses on the latter of these two approaches because the full scope and breadth of WFC has direct effects on individuals at most stages in the adult life span, and it has untold potential effects for individuals' children and other family members as well as for coworkers and employers.

## WFC: THE EVOLUTION OF A CONCEPT

Jeffrey Greenhaus and Nicholas Beutell (1985) defined WFC as "a form of interrole conflict in which role pressures from work and family domains are mutually incompatible in some respect" (p. 77). Building from this basic definition, a substantial literature in the fields of sociology, psychology, organizational behavior, management, and family studies has conceptualized WFC as a stressor. As such, WFC is believed to interfere with individual health and well-being, marital quality, family functioning, and fulfillment of job expectations.

There have been two primary innovations to the WFC concept since Greenhaus and Beutell's influential definition. The first primary innovation is the idea of directionality. Michael Frone, Marsha Russell, and M. Lynne Cooper (1992) argued that work-to-family conflict, or the extent to which work pressures impinge on family responsibilities, was conceptually and operationally distinct from family-to-work conflict, or the degree to which family responsibilities impinge on work responsibilities. Frone, John Yardley, and K. S. Markel (1997) then demonstrated the empirical distinction between work-to-family and family-to-work conflict and subsequently developed an influential model of the work–family interface, which emphasizes the reciprocal and bidirectional relationship between work-to-family and family-to-work conflict.

The directionality issue is interesting because it is in direct contrast to the original conceptualization of WFC. Greenhaus and Beutell (1985) specifically argued that WFC is inherently nondirectional until a decision is made to resolve one of the pressures contributing to the conflict, at which point directionality takes form, a situation sometimes referred to as work interference with family or family interference with work. This consideration of directionality creates conceptual confusion between WFC, conceptualized as a discrete occurrence of mutually incompatible role responsibilities, and work–family interference. Nevertheless, two separate meta-analyses have concluded that work-to-family and family-to-work conflicts are distinct yet bidirectionally interrelated. It is now standard practice in most research to conceptually and empirically separate work-to-family and family-to-work conflict.

The second primary innovation revolves around typologies of WFC. Greenhaus and Beutell (1985) originally speculated that WFC takes three primary forms: time-based (e.g., missing work because of a sick child or inclement weather keeps a child from school), behavior-based (e.g., treating family members like a subordinate at work), and strain-based (e.g., a person being short-tempered with his or her children following a bad day at work) conflict. However, only recently have researchers given serious

consideration to these different types of WFC. Whereas some reviewers of the work–family literature question the utility of different types of WFC (Bellavia & Frone, 2005), others conclude that there is useful evidence supporting the distinction of some types of WFC—particularly time- and strain-based conflict (Geurts & Demerouti, 2003). Some researchers suggest that differentiating time-, behavior-, and strain-based conflict is important because they may have different antecedents and consequences, thereby requiring different intervention strategies (Carlson, Kacmar, & Williams, 2000). Greenhaus, Tammy Allen, and Paul Spector (2006) expanded the original typology to differentiate energy-based conflict from strain-based conflict, whereby the former reflects physical or emotional exhaustion and the latter reflects the transfer of negative emotions or feeling states (e.g., stressed or cranky). The utility of differentiating among different types of WFC is not yet resolved and awaits focused empirical and theoretical analysis.

## MEASURING AND STUDYING WFC

In a review of the industrial-organizational psychological and organizational behavior literatures, disciplines central in studying WFC, Wendy Casper, Lillian Eby, Christopher Bordeaux, Angie Lockwood, and Dawn Lambert (2007) noted that 85% of WFC studies used survey methods. Several studies of WFC have been based on nationally representative samples such as the National Study of the Changing Workforce (NSCW), a sequential panel study that began in 1977 and was refielded in 1992 and 5 years thereafter by the Families and Work Institute. Other national data on WFC come from the Midlife Development in the United States survey, which was originally fielded in 1995. In addition to these nationally representative studies, a large number of studies have been conducted with industry- and company-specific samples of workers.

WFC research is almost exclusively cross-sectional. Casper and colleagues (2007) noted that only 6% of WFC studies conducted in the past 25 years have followed individuals over time. Studies based on longitudinal data have produced results that are consistent with the general view of WFC as a stressor. Frone and colleagues (1997), for example, found that elevated levels of family-to-work conflict predicted the onset of incident hypertension (i.e., high blood pressure) over a 4-year time horizon. Similarly supportive of the stress perspective, other researchers have documented that elevated levels of WFC predicted health declines over time (Grant Vallone & Donaldson, 2001). These few longitudinal

***Working Mom.*** *Kirstie Foster, a corporate public relations manager with General Mills, comforts her 10-month-old daughter Mia as she pays her a visit at the childcare facilities in the company's headquarters in Golden Valley, MN. General Mills is on Working Mother magazine's 19th annual list of the 100 best companies for working mothers.* AP IMAGES.

studies notwithstanding, surprisingly little is known about the antecedents and consequences of WFC over time.

Measurement of WFC has relied almost exclusively on self-reports that are either self- or interviewer-administered. Lois Tetrick and Louis Buffardi (2005) identified five to six measures of WFC most commonly used in the literature since the mid-1990s. They pointed out that there is substantial variation in the degree to which self-report measures have demonstrated construct validity, indicating that they actually measure WFC.

Some concern has been expressed that measures of WFC are inherently problematic because they overlap with outcomes of interest such as psychological strain, marital quality, and job satisfaction (MacDermid, 2004). Others question the structure of items assessing work-to-family conflict and family-to-work conflict and raise concerns that the absence of parallelism could create the impression that one direction of conflict is more common than the other (Bellavia & Frone, 2005). Still others have been critical because common measures do not capture the conceptual difference between WFC, such as the simultaneous occurrence of incompatible pressures in work and family domains, from work–family interference or the extent to which experiences in one domain impede activities in the other (Carlson & Grzywacz, 2008). Some investigators have developed proxy reports whereby knowledgeable counterparts report on levels of WFC for a focal individual, such as a spouse (Small & Riley, 1990); however, proxy measures are infrequently used. The infrequent use of proxy measures is driven, at least in part, by the fact that WFC can occur at both the social (and observable) and psychological (and nonobservable) level, suggesting that proxy reports can only capture a portion of WFC.

## FINDINGS FROM WFC RESEARCH

The WFC literature is large and spans multiple disciplines. Since the late 1990s, there have been no fewer than 10 narrative reviews of the work–family literature. Most of these reviews provide summaries of the antecedents and consequences of WFC (Bellavia & Frone, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). Additionally, there have been several quantitative reviews of the WFC literature (Allen, Herst, Bruck, & Sutton, 2000; Byron, 2005). Interested readers are encouraged to consult these. In this entry, a few main findings are emphasized that are likely to be of particular interest to life course researchers.

**WFC across Time** Relatively little research examines WFC across either historical or developmental time. In terms of historical trends, evidence from the NSCW indicates that levels of WFC increased among American workers in the late 20th and early 21st century and that this increase is not attributed to growth in the proportion of women in the labor force and increases in dual-earner families (Winslow, 2005). On the developmental side, in light of the absence of longitudinal studies of WFC, there is limited ability to determine whether WFC changes across the adult life span. Based on cross-sectional data, Joseph Grzywacz, David Almeida, and Daniel McDonald (2002) reported that both work-to-family and family-to-work conflict increased and then declined across adulthood, with both directions of WFC peaking between the ages of 35 and 44.

Drawing on birth cohort data from Sweden, Gunn Johansson, Qinghai Huang, and Petra Lindfors (2007) reported significant differences in WFC among 43-year-old women, depending on life course employment patterns: Women with more intensive and persistent employment coupled with late childbearing generally reported greater WFC than those who began parenting earlier while working part time. Deborah Carr (2002) reported cohort differences in the effects of work–family trade-offs on psychological well-being. Despite these and other studies using birth cohort studies or a life course approach, there is a substantial need to better understand whether experiences of WFC have changed over time and how the ebb and flow of work and family responsibilities across the adult life span may contribute to age-related differences in WFC.

**WFC across Social Groups** Gender is a dominant focus of WFC research, both historically and substantively. The historical focus arises from the reality that WFC research is rooted in the large-scale shift of women and mothers of young children into the labor force. Although women and mothers have always been in the labor force, particularly women from minority and working-class families, the substantial increase in labor force participation among White middle-class women stimulated a large amount of research questioning the degree to which problems arise from women's employment. The substantive interest in gender differences in WFC arises from a theory suggesting that the worlds of work and family are inherently gendered and that gender-specific constructions of these worlds would create unequal experiences of WFC. Joseph Pleck's *(1977) asymmetrical boundary hypothesis*, or the view that women and men will have different patterns of WFC because of socialization patterns that assign responsibility for family to women and responsibility for work to men, exemplifies the gender argument made by several researchers.

Despite strong theory that indicates otherwise, there is only mixed evidence of gender differences in WFC. One review concluded that "there is little support for differences across basic characteristics that are typically examined such as gender" (Bellavia & Frone, 2005, p. 118). Likewise,

another study reported that "there is no clear pattern in terms of the relative importance of work or family domain predictors for men's and women's work-family conflict" (Eby et al., 2005, p. 181), although those authors did conclude that gender is deeply engrained in work–family relationships. Kristin Byron's (2005) conclusion from a meta-analysis is that there is little evidence that experiences of WFC differ between women and men. Research acknowledging that women are overrepresented in some occupations whereas men are overrepresented in others and that uses gender-neutral measures of WFC are needed to resolve the inconsistent pattern of results observed in the WFC literature.

The WFC literature has been criticized as being overly focused on individuals who are valued by the labor market, that is, White, middle-class individuals working in professional jobs (Lambert, 1999). Little research examines WFC among members of racial and ethnic minority groups or compares experiences of WFC across racial and ethnic groups; such research is sorely needed. Evidence from the 1997 NSCW suggests significant racial and ethnic variation in WFC (Roehling, Jarvis, & Swope, 2005). Research that treats race and ethnicity as more than control variables would improve theoretical understanding of WFC—recognizing that cultural beliefs likely shape the relative salience of work and family and the importance of integrating these domains (Korabik, Lero, & Ayman, 2003). On a more practical level, in light of the growing diversity of the labor force in the United States and around the world, research that documents and seeks to understand racial and ethnic variation in WFC is needed to ensure that all workers benefit from governmental and occupational programs designed to help workers effectively integrate their work and family lives.

Likewise, location in the social hierarchy has not been adequately handled in the WFC literature. Jody Heymann (2000) characterized jobs occupied by lower-class individuals as requiring nonstandard and erratic work hours and lacking necessary benefits (e.g., child sick leave) and argued that these types of jobs create WFCs that exacerbate health disparities. This basic argument has strong face validity, but there is little attempt to document social class or socioeconomic inequalities in WFC or to consider the degree to which WFC contributes to difficulties experienced by lower-status families. The few studies on the topic find that higher-status workers, as indicated by education and occupation, report more rather than less work-to-family conflict (Schieman, Whitestone, & Van Gundy, 2006). Single mothers report high levels of WFC (Avison, Ali, & Walters, 2007), but whether this is attributable to family structure or socioeconomic hardship remains uncertain. More research is needed to firmly determine whether the WFC is unequally shared in the social hierarchy and the potential role of WFC in contemporary social problems such as health disparities.

## CONCLUSION

Evidence from the large multidisciplinary literature suggests that WFC is a pressing social problem in need of policy solutions. Diane Halpern (2005), in her presidential address to the American Psychological Association, described WFC as the issue of our time. WFC is an issue confronted by most workers, regardless of whether it is the new parent transitioning back to work, the midlife individuals sandwiched between children and aging parents, or the older worker laying plans for retirement. Echoing Halpern's claim, the National Institute for Child Health and Human Development has created a network of researchers to develop and test policies and organizational practices that reduce WFC. Workplace flexibility, particularly management strategies that give workers control over when and where job-related tasks are performed, is believed to be invaluable for minimizing WFC. Similarly, systematic training of supervisors and managers to help them be more supportive of employees' lives outside the workplace also offers promise for minimizing WFC. These types of strategies help adults respond effectively to legitimate demands that arise in daily life, such as needing to drive an aging parent to a health care appointment or meeting with a child's teacher to resolve a learning or behavioral problem. The short- and long-term consequences of strategies to reduce WFC remain unknown, but researchers and policy advocates believe that they will produce healthier and more content workers, better-functioning families, and more productive organizations.

The WFC literature has developed substantially since the 1980s with contributions from several disciplines. Despite the breadth and depth of the literature, substantial room remains for advancements and new areas of research. Longitudinal research examining WFC over time is needed, as is research devoted to documenting and understanding secular trends in WFC. Advancements in measurement tools are needed to better capture WFC while remaining attentive to problems that arise from exclusive reliance on self-report data. Finally, focused research on understudied segments of the population, such as economically disadvantaged families and members of racial and ethnic minority groups, is needed. Focused research attention in these areas will deepen understanding of WFC and contribute to the creation of workplace and public policies that promote adults' ability to integrate work and family.

SEE ALSO Volume 2: *Fatherhood; Gender in the Work Place; Housework; Motherhood; Policy, Family; Stress in Adulthood; Time Use, Adulthood;* Volume 3: *Caregiving.*

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***Joseph G. Grzywacz***

# ZNANIECKI, FLORIAN

## *1882–1958*

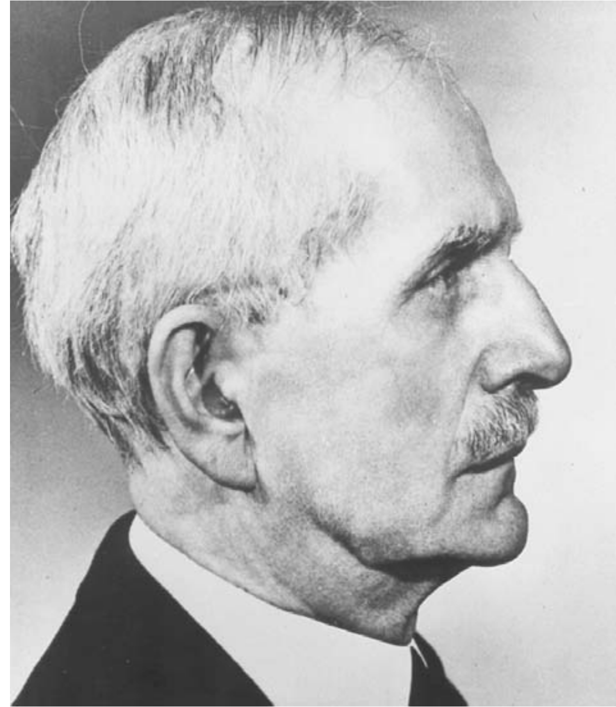
Florian Witold Znaniecki was born on January 15 in Świątniki near Włocławek, Poland; he died on March 23 in Champaign, Illinois. A sociologist, social theorist,

and philosopher of culture, he taught at the Poznań University (1920–1939) and the University of Illinois (1940–1958). Together with William I. Thomas of the University of Chicago he published *The Polish Peasant in Europe and America* (1918–1920), considered an early examination of what would later be called the life course. Another of his notable works is *Cultural Reality* (1919/1983), which outlined his theory of human action and values. Recognized as an eminent sociologist of education, he directed the Education and Social Change project at Columbia University's Teachers' College from 1930 to 1933. In 1956 he was elected as President of the American Sociological Association.

Znaniecki was one of the first sociologists to consider the two-way process by which society is maintained through the actions of individuals while, at the same time, the actions of individuals are shaped by society. This duality is central to sociology in general and to the study of the life course in particular. Znaniecki focused on culture and emphasized its construction by individuals as social agents. His work provided the conceptual and empirical foundations for the development of life-course studies.

Znaniecki's approach to understanding the relationship between society and the individual emerged from his theory of cultural systems, which he developed in *The Method of Sociology* (1934), *Social Actions* (1936), and *Cultural Sciences* (1954). In Znaniecki's view, culture encompasses multiple systems—social, economic, hedonistic, technical, cognitive, aesthetic, and religious—that are composed of different values and constructed by human activities. Within the cultural system, social systems are crucial for their perpetuation and development. Social systems encompass social actions, relations, roles, and groups. The "humanistic coefficient" of cultural systems refers to their meaning and axiological significance in the experiences of individuals as members of various groups. To Znaniecki, the individual "self" is not independent but exists with the humanistic coefficient as an object of the active experience of others and of the individual him- or herself. In short, individuals are constructed by their participation in cultural systems as social values and social agents. Znaniecki's works relating to individuals as cultural and social persons include *Wstèp do socjologi* [Introduction to Sociology] (1922), *The Laws of Social Psychology* (1925/1967), *Socjologia wychowania* [The Sociology of Education] (1928–1930), *Ludzie terázniejsi a cywilizacja przyslósci* [People of the Present and the Civilization of the Future] (1934), *The Social Role of the Man of Knowledge* (1940), and *Social Relations and Social Roles* (1965).

Znaniecki combined data from individual life histories and the study of social groups to identify major types of



***Florian Znaniecki.*** **COURTESY OF THE AMERICAN SOCIOLOGICAL ASSOCIATION.**

social personalities, which are formed through the interactions between individuals and social circles. He argued that three kinds of social circles are particularly relevant in the formation of social personalities: educational, occupational, and companionable. Social personality is the cultural, constructionist view of the individual. Znaniecki distinguished four major components of the social person: the *reflected self*—the way individuals believe members of their social circle view them; the *social position,* including social standing (the rights of being recognized as socially valuable) and economic status; the *social function,* comprised of obligations such as objective tasks and moral integrity; and finally the *reconstructed self,* which is independent from the social circle and is both autobiographical (related to one's memories) and one's ideal (or the desired self that one projects into the future).

Znaniecki believed that social personality evolves throughout the life course, because each new social role introduces new experiences and leads to the development of new active tendencies. The extent to which social tendencies developed early set life trajectories varies across individuals. What develops is the tendency toward either a stable and predictable life course or a changeable and unpredictable one. Personality is conceptualized not as a reflection of one's inborn biological or psychological

characteristics but as shaped by social and cultural context. Particularly important in the early part of the life course is the emergence of person-creating tendencies, that is, tendencies to form one's person according to a unique pattern. An individual's social biography is actualized in various social circles through these person-creating tendencies.

Znaniecki conceived of the individual life course very differently from those who built on the basic framework of biological maturation. He took into consideration the influence of social circles and developed a role theory that took into account the dynamic interplay between society and individual, in contrast to those who either emphasized the ''self'' as the dominant element of roles or who highlighted the social structural aspects. For Znaniecki, the social role is a purely cultural phenomenon, involving the active participation of the performer and other individuals as social agents. An individual's participation in social life in terms of role performance implies four components: the social person, social circle, duties, and rights. Znaniecki's work contributed to the study of the historical evolution of various social roles: of men of knowledge, educators, religious and political personas, as well as to the study of marital and erotic relations, mother–child relations, fraternal relations, and friendships.

**SEE ALSO** Volume 3: *Lopata, Helena; Self.*

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***Elżbieta Hałas***

A groundbreaking reference work in life course studies — a field within modern sociology that provides an interdisciplinary examination of the convergence of individual life pathways with social structures — the *Encyclopedia of the Life Course and Human Development* explores major stages of human development. Organized into three volumes (Childhood and Adolescence, Adulthood, and Later Life), the nearly 400 signed entries in this set examine how enduring experiences, major transitions, and events such as having children and childcare, education, stress, marriage, career, addiction, friendship, disease, spirituality, and retirement influence and affect an individual's life course.

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# *Encyclopedia of the* LIFE COURSE and HUMAN DEVELOPMENT

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DEBORAH CARR Editor in Chief

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VOLUME 3

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**Encyclopedia of the Life Course and Human Development**
**Deborah Carr, Editor in Chief**

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# *Introduction to Volume 3, Later Life*

Many students become interested in the social sciences because they want to know how people live their lives—their work lives, their family lives—and they also want to know why people make the choices they do. People who have meaningful experiences and relationships with grandparents and older relatives often become interested in the study of aging. College students often bring stories to the classroom about how their grandparents (and great grandparents) grew up in dramatically different times and as a result had different life experiences that seem unfamiliar to young people today. Grandmothers had far fewer opportunities to earn college degrees and have careers compared to today's young adults. Grandfathers often were the sole breadwinners in their households providing stable wages and a modest standard of living that benefited their families. These kinds of stories are familiar and expected. However, what is also true is that stories that students share about their older relatives are wide ranging. For example, some tell stories of grandmothers who worked and raised children by themselves, or great uncles who never married. Life course scholars agree that all of these diverse life experiences contribute to variations in later life experiences and statuses. It has been the work of life course scholars to disentangle complex relationships between history and biography in order to learn how each generation is different from all others and why there are differences within each generation.

One of the most significant demographic trends in the United States has been the aging of the population. The number of older adults in the United States—defined as persons ages 65 and older—will more than double in size from 2005 through 2050. The number of working-age Americans and children will increase more slowly than the older population, and will shrink as a proportion of the total population. In the United States, and nearly all developed nations, declining fertility rates and mortality rates have led to a large increase in the older adult population, both in relative and total size. This trend is well described in several entries in this volume (see both Age Structure and Population Aging in this volume). The "graying" of the world's population has inspired a large body of research and theorizing about the latter part of the life course. The life course paradigm has provided a guiding framework for much of this research. The entries in Volume 3 summarize much of the best life course scholarship that has led to a greater understanding of later life. I will next provide an overview about how we might think about defining later life. Then, I'll discuss several of the major trends in aging research that are described in this volume.

## WHAT IS "LATER LIFE"?

The definition of later life is itself a subject of debate. Typically later life, or "old age," is considered to begin at age 65. However, beliefs about what constitutes "old age" vary across time and place. In nineteenth century America, when it was much less common to encounter 60 and 70 years olds, defining old age to begin at age 55 may have been more appropriate. Even today, among the younger populations of the world such as those in South Asia and Africa, researchers define old age as 50 or 55+ or even younger. My own research in Nepal has shown that significant physical impairments are common among people as young as age 45 and 50, especially among Nepalese women. I have met women who appear be in their 80s because their skin and teeth are weathered and they are stooped over, their backs appearing "broken" due to years spent doing arduous farm and household labor. When interviewed, these women report they are decades younger than they appear to be. If the goal of defining old age is to direct attention, policy, and resources to those in need—the definition of old age might account for declining physical health. However, if one were to take physical health alone as a mark of old age—age 65 might be too young of a definition—especially in the United States and other wealthy nations, where a great many adults live impairment-free throughout their 60s and 70s (see "Disability and Functional Limitation, Later Life" by Martin).

Definitions of age may also encompass individuals' own perceptions and self-evaluations. It is not uncommon to "feel" decades younger than the chronological age on a driver's license (see "Age Identity" by Westerhof). This may be especially true of baby boomers who might still identify with a youthful 1960s identity that encompassed the then-revolutionary ideals of peace, self-expression, and free love. By and large, however, a definition of 65+ remains useful to researchers because policies, such as Social Security, use age 65 to define cut points for age-related benefits and services.

## THE RISE OF THE "THIRD AGE"

One of the most significant trends in aging research is the recognition that later life, whatever definition is used, is not a time of inevitable decline. In their entry "Theories of Aging," Norella Putney and Vern Bengtson write that disengagement theory, which emphasizes the necessary withdrawal of older persons from social life, has largely been refuted by empirical research. Instead, this theory has been supplanted by activity theory and continuity theory, which stress the importance of active engagement in the social world for optimizing well-being in later life. As a result of this theoretical shift, there has been an explosion of research on topics such as creativity and wisdom (both in this volume). We learn from these entries that later life can be a time of psychological *growth*, rather than decline or stability. Also in this volume, we describe the time that older adults spend doing volunteer work (see "Volunteering, Later Life" by Burr) and traveling (see "Leisure and Travel, Later Life" by Gibson). All of these topics can be summarized using the label of Third Age. Third age represents the point of view, among scholars and laypersons, that later life can be a time to set new life goals and create new meaning. One only has to spend some time using Google and key words like "seniors and art" and "seniors and travel" to know that older adults are an active, vital community.

## SOCIOBIOLOGICAL INFLUENCES ON AGING

Another important trend in aging research is increasing multidisciplinarity of ideas and research, especially the use of both social and biological perspectives to better understand aging. Sociologists, economists, epidemiologists, psychologists, physicians and many others have engaged with one another to investigate the interrelationships among social status and biology in later life. This volume documents the improved physical health of the older population compared to years past. At the same time, there are new health problems in later life that are growing in importance such as diabetes and dementias, both of which are topics covered in this encyclopedia. In addition to social explanations for the trends in health and

well-being, there has been increased scholarly attention to biological influences over the life course on later life health (see "Genetic Influences, Later Life" by Gavrilova & Gavrilov).

Greater longevity or lengthening of the life span and better health have also reorganized the social world of older adults. For example, as people live longer and healthier lives it is possible to occupy roles for prolonged periods of time. Thus, we have seen an increase in the amount of time one spends in some roles such as retirement (see "Retirement" by Williamson & Higo ). Also, time spent on various family roles such as the grandparent role and the great grandparent role has increased (see "Grandparenthood" by Szinovacz). Another consequence of greater longevity is a rise in the variability of roles as not only the time spent in roles increases but also the incidence of new roles increases. For example, one of the notable features of the lengthening life course is that more and more older persons are continuing their education during their post-retirement years (see "Lifelong Learning" by Hamil-Luker). Finally, men and women are more likely to have more complicated combinations of roles than in the past. As a result there are many men and women who experience psychological stress from role overload and role strain (see "Stress in Later Life" by Kahana, Kahana, & Hammel). This trend may be particularly true among older caregivers who take on care of a spouse or partner (see "Caregiving" by Silverstein).

## NEW DATA, NEW FINDINGS

Glen Elder (1985), a sociologist who is considered the architect of the life course paradigm, has observed that that theoretical developments combined with new methodological tools and data have spurred considerable growth in later life scholarship over the past four decades. Many of the authors in this volume credit advances in research in their respective areas to availability of new data; especially longitudinal data (see the composite entry "Data Sources, Later Life"). It is difficult to determine what kinds of behaviors or statuses may be apt to change as one ages when data are from one point in time (referred to as cross-sectional data). With cross-sectional data, older people are compared to younger people at one point in time and it is tempting to attribute any observed differences from these data as being related to aging. It is not possible to disentangle age, period and cohort effects with one wave of data. For example, in her entry "Religion and Spirituality, Later Life," Linda George writes that although older people appear more religious than younger people in cross-sectional studies, only longitudinal data (where individuals are interviewed at various points in their lives) can truly reveal whether and how individuals change as they age. Many entries in this volume describe a similar "data dilemma" (see "Sexual Activity, Later Life" by Waite, Das, & Laumann) that has only recently progressed due to the availability of new data.

Two important types of longitudinal data are described in this volume. First, there are long-term longitudinal studies that follow people over many stages of life. For example, The Wisconsin Longitudinal Study (WLS) follows a sample of Wisconsin high school graduates from the class of 1957 from ages 18 through late life. With longitudinal data such as these, it is possible to understand how early family formation and career choices affect later life outcomes such as retirement and health. Other longitudinal studies begin at later points in the life course such as the Health and Retirement Study (HRS). The HRS interviews people at regular, frequent intervals (every 2 years) so that the dynamics of change associated with aging can be better understood. The importance of data such as the HRS should not be underestimated. HRS data have been widely used since the study began in 1992. The HRS has led to similar studies in Europe (see "Data Sources, Later Life: English Longitudinal Study of Ageing [ELSA]" by Marmot & McMunn). Also, many entries in this volume report on findings from the HRS. It has been a monumental data collection effort, offering rich data over time on a wide range of topics. While the HRS initially focused on the aging experiences of the generations that preceded the baby boom generation, younger birth cohorts have been added to the HRS study. So, new information about the baby boom cohort have become available to researchers recently. This design—where multiple cohorts are followed over time—is an important advance in aging research.

## A FINAL NOTE TO THE READER

I began this introduction by discussng about the predictability of life transitions and the importance of one's history in shaping his or her later life chances. Yet I also noted the incredible diversity of experiences from one generation to the next and also within a given generation. When asking authors to prepare their entries for this volume, we asked them to include comments about this diversity. As a result, the entries in this volume discuss generational differences, cross-cultural differences, and differences by age, gender, social class and race within the United States. It is our hope that readers will find the entries in this volume to be informative about both major trends and patterns over the life course yet also provide many unexpected findings.

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***Amy M. Pienta***
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# A-B

## ACTIVE LIFE EXPECTANCY

One of the defining features of the 20th century was a steady increase in life expectancy, accompanied by rapid population aging—a trend that is expected to continue into the foreseeable future as more individuals survive to older ages, and fertility rates remain low. Accompanying the growth of the older population is an increasing need for support services for individuals with physical limitations and disability. Active life expectancy is a measure researchers have developed that can succinctly describe the average amount of time one is expected to live with disabling conditions in a population. It provides a basis for understanding the time individuals in a population are likely to need support from others or be in need of health care.

### DEFINING ACTIVE LIFE EXPECTANCY

Active life expectancy is a summary measure of population health, which integrates age-specific disability and mortality into a single measure, indicating the average number of years of life expected to be spent active after a specified age. The remaining life expectancy is inactive. When life expectancy is divided into these states, *active* years are usually defined as years lived without a specifically defined disability, whereas *inactive* years are usually defined as years lived with a disability. The inactive years are not necessarily lived at the end of life, and can be distributed throughout the remaining lifetime. The term *inactive* is not meant to imply complete physical incapacitation. Definitions of *inactive* vary from having any difficulty performing normal tasks to having severe limitations that would make it difficult to live independently in a community setting and provide self-care. The accompanying figure shows an example of active and inactive life expectancy in the United States at age 65 in 1980 and 1990. As seen in Figure 1, the sum of the active and inactive (sometimes labeled *disabled*) years is life expectancy at a specific age.

Active life expectancy tends to be used synonymously with the term "disability-free" life expectancy—both of which are subsets of the broader term *healthy* life expectancy. Whereas active life expectancy is usually defined as life without some form of physical limitation or disability, healthy life expectancy can be defined as life without a disease or impairment such as diabetes, cognitive loss, obesity, or hypertension.

As with other life table-based measures, active life expectancy measures are not affected by the composition of the population; therefore, the results can be compared over time or across populations, assuming similar measurement of disability or health state. Like life expectancy, active life expectancy does not represent the actual experience of a real population, but rather the number of years a hypothetical life table population would live in active and inactive states if it experienced the observed mortality and morbidity rates.

Active life expectancy data are used by official government publications in the United States, Europe, Asia, and the World Health Organization (WHO), as well as by journalists and public health researchers around the world. It can be used for several purposes including: to provide a summary description of mortality and morbidity for a population; to indicate health inequalities for subgroups in a single population; to make comparisons

## LIFE TABLE

A life table shows the life expectancy of individuals at different ages. It is a series of calculations based on age-specific mortality rates that summarize the effect of mortality on the number of survivors at a given age, and the expected length of life after that age. Life table measures are valuable because they are succinct indicators that reflect mortality conditions across the life course and are unaffected by the number of people in each age group in the actual population, making them comparable across populations and subgroups of the population. Life tables are usually based on mortality data for a short period of time rather than for a real cohort of people throughout life. Because of falling mortality rates over time, actual life expectancy lived by generations has usually been higher than the life expectancy at birth from the life table in the year of their birth.

across populations; to monitor changes in the health of a population; and to asses the contribution of specific risk factors to population health outcomes and thus inform policy debates. *Years of inactive life* can provide an indicator of the average time individuals will need health care or social or institutional support, and is a measure that can also be used to provide a sense of the magnitude of the potential or realized impact of public health programs or other health interventions.

It should be noted that there is no single number alone that is considered the active life expectancy of a population at a given moment because the value depends on the definition of *active* and the method used to calculate the estimate. The definition of *active* can vary from study to study. When the estimate covers all ages, general definitions of disability are used; with older individuals, the definition of disability (also referred to as inactive) is often related to the ability to care for one's own needs independently based on scales that gauge one's capacity to perform various activities of daily living. In addition, inactive years can be further subdivided by levels of severity from the debilitating (e.g., being unable to bathe oneself or eat without assistance) to the more mild (being unable to go shopping or manage money, for instance), depending on the extent to which the disability limits participation in normal roles and daily activities.

### METHODS OF CALCULATION

The first and most commonly used approach to calculating active life expectancy is the prevalence-based life table method, also known as the Sullivan method (1971), named after its designer. This method, developed in the late 1960s, combines age-specific disability, or another indicator of health status prevalence, with the life table functions derived from a set of age-specific mortality rates, to divide the life table years lived into active and inactive. This method remains the most widely used since cross-sectional data on the prevalence of disability and mortality have been readily available. There are multiple advantages to Sullivan's method: (a) it has a straightforward protocol that does not require special software; (b) it can be applied to cross-sectional disability data (a one-point-in-time observation) that are more available than panel surveys (multiple observations); (c) only moderate sample size in the disability survey is required to produce reliable age-specific prevalence estimates; (d) an abridged life table is sufficient for mortality information because the method is not sensitive to the size of the groups; and (e) prevalence-based methods are less influenced by survey design and model assumptions than longitudinal approaches. For a detailed description of this method see *Health Expectancy Calculation by the Sullivan Method: A Practical Guide* (Jagger, Hauet, & Brouard, 2001).

There are some limitations and disadvantages to this widely used approach. The biggest disadvantage is that this method provides little information about the process of health change, which figures into the estimated length of healthy life. Increases in healthy life could come from reductions in the onset of disability, improvements in recovery from disability, or changes in mortality. Second, it may not be a sensitive indicator of change over time because the prevalence of disability may not change as quickly as disability incidence rates. Finally, mortality rates are usually assumed to be the same for both active and inactive individuals, and this assumption is not likely to be accurate. The Sullivan method has been widely used around the world in order to compare change in health or disability over time, differences across countries, and differences within countries.

Building on the Sullivan approach, the WHO uses a measure called *disability-adjusted life expectancy* (DALE). This measure weights different levels of disability as less than full years based on severity, as well as the duration of the disability, so the years lived do not really add up to the total length of life expectancy. This approach is based on cross-sectional data and thus has all of the same limitations as the Sullivan approach; however, it has been used in international comparison studies because the WHO collected relevant data for this measure. The WHO used the DALE measure to compare the health

of 191 member state populations in their Global Burden of Disease publications (Lopez et al., 2006).

Incidence based methods estimate active life using longitudinal data that indicate changes in health or disability state over time. Analysis of active life expectancy based on longitudinal data from a panel study of the population is of increasing importance as researchers investigate the causal mechanisms driving changes in population health. Disability is based on incidence, the new occurrence of a condition at a follow-up interview, and thus is focused on recent health events rather than lifetime events. Mortality among the active is also estimated separately from mortality among the inactive based on the panel study, allowing variation in mortality to be reflected in the estimates of active life expectancy. The data input into the life table are the age-specific transition rates that reflect bidirectional transitions between the active and inactive states as well as to death from either an active or inactive state. This is the theoretically preferred method of estimating active life expectancy and has more potential to provide useful information about the processes of disability onset, recovery, and death.

However, this analytic approach is significantly more complicated to model. The major difficulty in adopting this approach is that it requires extensive longitudinal data, with a substantial sample size in order to model the onset of and recovery from disability and transitions to death. The model is also somewhat sensitive to the assumptions underlying the estimation process such as the functional forms of the transition schedules. Several methods have been developed to analyze longitudinal data including: a hazard model approach (Crimmins, Hayward, & Saito, 1994); an algorithm based on Markov chains called IMaCh (Liévre, Brouard, & Heathcote, 2003); a Markov transition model; and a Bayesian Monte Carlo estimation technique.

## RELATED CONCEPTS

Additional summary measures of active life expectancy have been developed using similar conceptual approaches. In the 1940s the concept of *years of life lost* was developed to assess the health burden associated with deaths prior to the age of average life expectancy based on a simple calculation of the number of deaths multiplied by the life expectancy at the age at which death occurred. More recent measures of life lost have incorporated information on years lived in a disabled state and the time lost to death. For example, in 1993 the WHO introduced *disability-adjusted life years* (DALY) to summarize the effect of both premature death and disability, with each DALY representing one year lost of nondisabled life. The DALY is a health gap measure that identifies years lost to lower quality of life, as well as death. One criticism of the DALY is that it is based on an arbitrary definition of ideal health, with subjectively defined disability weights.

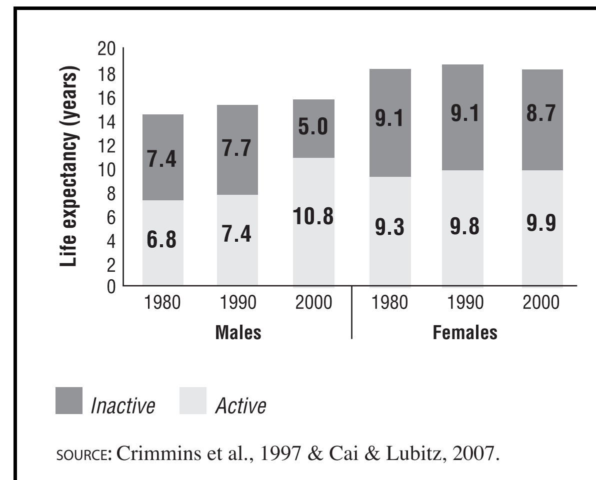


***Figure 1.*** *Active life expectancy at age 65 for the United States. (Crimmins, Saito, & Ingegneri, 1997; Cai & Lubitz, 2007.)* CENGAGE LEARNING, GALE.

DALYs have been used to compare health care cost-effectiveness, with recommendations based on a cost per DALY gained. Both the DALY and the DALE (described earlier) can be used to link potential disease-specific and risk factor interventions with population health outcomes.

*Quality-adjusted life years* (QALY) is usually used as a quantifiable measure of the impact of a medical intervention. In this measure, each year in perfect health is assigned the value of 1.0, each year of non-perfect health (e.g., disabled or otherwise physically limited) is assigned a fractional value relative to its impact on quality of life, and death is assigned a value of 0. The values assigned for non-perfect health are the subject of some debate, and can be calculated by several methods including what follows: the time-trade-off method, where respondents choose between remaining ill for a period of time or being restored to good health with shorter life expectancy; the standard gamble method, in which respondents choose between remaining ill or choosing a risky treatment that has a chance of restoring health or killing them; the visual analog scale in which individuals rate ill health on a scale from 0 (*death*) to 100 (*perfect health*); or the EuroQol EQ-5D questionnaire, a classification system based on dimensions such as mobility, pain, and anxiety (Murray et al., 2002). Multiple question responses can be collapsed into a single health state utility score. Additional information about each of these methods can be found in the *Global Burden of Disease and Risk Factors* report (Lopez et al., 2006) and the WHO's *Summary Measures of Population Health* (Murray et al., 2002).

## TRENDS IN ACTIVE LIFE EXPECTANCY

Active life expectancy became a popular measure with rising interest in whether there has been a compression of morbidity. (Compression of morbidity refers to the concept of pushing all the illness and disability of one's life into as small a time period as possible.) This interest has grown with increasing focus on the quality, as well as the quantity, of life. Many analyses have addressed the issue of how changes in total life expectancy are divided into changes in active and inactive life. A compression of disability or morbidity would be an increase in life expectancy resulting in a greater proportion of life lived active or without disability; an expansion of disability or morbidity would be an increase in the proportion of life lived in the inactive state or with disability or morbidity. It is also possible that both changes occur together, proportional increases in both active and inactive life expectancy, resulting in no change in the relative proportion of life years lived disabled or nondisabled. Understanding which of these scenarios is occurring can potentially have an important impact on planning for the health and support needs of a society, and is of increasing importance as the proportion of the population at older ages increases.

Cross-sectional estimates of expected life that is free of bedridden disability and institutionalization were first attempted in the 1960s. These first estimates of the expectation of healthy life showed increasing healthy life expectancy between the years 1958–1966, whereas life expectancy as a whole did not change. Between 1970 and 1980 life expectancy in the United States increased by about three years and most of the increase was in years of disability. Studies for the mid-1980s through the mid-1990s suggest that disability, particularly severe disability, has declined over this time period, leading to overall increases in active life expectancy. Trends in England and Wales, Canada, and France have been similar to those in the United States: Before 1980 increases in life expectancy were concentrated in disabled years; after 1980 life expectancy in the active state accounted for the majority of the increase in life expectancy.

A small number of studies of trends in active life expectancy based on longitudinal data have been published to date and these are limited to analysis of the older population. Results appear to be similar to studies for the whole population based on cross-sectional data that indicate increases in active life expectancy and decreases in life expectancy with severe disability from the mid-1980s through the late 1990s (Cai & Lubitz, 2007). In addition to calculating estimates of active life expectancy, longitudinal (or over-time) analyses of active life expectancy also investigate trends in disability onset, recovery, and mortality, helping to explain the ways in which the processes leading to disability prevalence may be changing over time. Studies suggest that there have been declines in disability onset through the mid-1980s and the mid-1990s as well as decreases in mortality for both those who are disabled and those who are not.

## DIFFERENCES IN ACTIVE LIFE EXPECTANCY BY SEX, RACE, AND SOCIOECONOMIC STATUS

Researchers have used active life expectancy to summarize differentials in disability and mortality for different subgroups of the population. For example, many studies have addressed differences in active life expectancy by gender, socioeconomic status, and race. Women generally have longer life expectancy than men, and when disability is defined in a yes-or-no fashion, studies show that women tend to have both longer active and longer inactive life than men. Most studies show that women live a greater proportion of their longer lives with disability. In studies where disability severity is taken into account, such as those based on the DALE measure, the proportion of remaining life in disability is more similar for both sexes. This could result from men spending less time with disability, but having more severe disability, which is more heavily weighted in the DALE calculation.

Health expectancy indicators are comparable across groups with different age structures, and are useful for comparing socioeconomic differences across groups, or over time. Socioeconomic differences in active life provide a summary indicator of the effects of inequality on health or disability. Most studies find that people who have lower socioeconomic resources have shorter life expectancy and live a greater proportion of their lives in a disabled state. Differences by social class in expected active life are usually larger than differences in total life expectancy. Reducing socioeconomic differences in active life has become a public health goal in many countries. Trends over recent decades suggest that differences between low and high socioeconomic status groups have been growing, led by increased morbidity differentials (Crimmins & Saito, 2001). Although many different measures of socioeconomic status are used in the literature, education level is the most common measure because it does not generally change after adulthood, and it is not affected by poor health in later life, as income or occupation might be.

In the United States race and ethnic differences in active life expectancy have become an important area of inquiry as these are, of course, highly related to socioeconomic differences. African Americans in the United States have a shorter active life expectancy and a longer disabled life expectancy (Hayward & Heron, 1999). Race and gender also appear to interact; a number of studies conclude that African American women live a notably greater percentage of their lives with disability than

African American men, who have the shortest life expectancy and largest numbers of life years lost.

## INTERNATIONAL COMPARISONS

Measures of active life expectancy have been developed for many countries around the world, led in part by the *Réseau Espérance de Vie en Santé* (REVES) International Network on Healthy Life Expectancy and the Disability Process, and the WHO. The WHO's major contributions are part of a larger initiative called The Global Burden of Disease, which was an attempt to summarize and compare the health needs of countries all over the world. Efforts have been made by researchers to harmonize data collection on disability and health measures in surveys across countries, and many new studies are designed with international comparisons in mind.

International comparison studies by academics generally use the Sullivan method or DALE to calculate expected years active and inactive, as well as the proportion of remaining life expected to be lived in an active state. Precise rankings of countries on active life expectancy are difficult to make, as residents of different countries may evaluate health problems differently and different definitions of disability are employed in different surveys.

Rankings of countries on active life made by the WHO generally parallel rankings of life expectancy. More developed nations report both longer lives and more years active; less developed countries report shorter lives, with a smaller percentage of remaining life expected active. For example, the WHO estimated years of healthy life lost in different regions of the world and found developed countries average about 8% of healthy life lost (of a 77 year life expectancy), while a comparable measure for sub-Saharan Africa is 15% (of a 50 year life expectancy) (Mathers, Sadana, Salomon, Murray, & Lopez, 2001).

Large variations in active life expectancy exist between regions within national borders as well. In Australia, for example, active life expectancy can vary by as much as eight years across states; a comparison of small regions in Canada found differences of active life expectancy as large as 11.5 years; in both Spain and France studies examining active life expectancy in the 1980s and 1990s found increases of up to 4 years in some regions, and declines of 4 years in other regions (Robine, Jagger, Mathers, Crimmins, & Suzman, 2003).

Active life expectancy can be affected by lifestyle and behavioral choices, physical activity, social interactions, random events such as accidents or catastrophic health problems, and preventable strategies to avoid injurious situations. Recovery can be affected by these issues as well, in addition to medical interventions and the availability of compensatory services.

## SUMMARY

Active life expectancy can provide a succinct indicator of the health and mortality of a population as well as a summary of differences within populations, changes over time, or differences between countries. Trends in active life expectancy appear to show increasing length of active life expectancy, especially when severe disability is used to define inactive, and little change over time when mild disability is used to define inactive. Early 21st-century trends suggest widening differences across socioeconomic classes. A valuable summary of information on the concept of active life expectancy, methodological approaches, and empirical findings can be found in *Determining Health Expectancies* (Robine et. al, 2003), which is written and edited by the members of the REVES International Network on Health Expectancy and the Disability Process.

**SEE ALSO** Volume 3: *Disability and Functional Limitation, Later Life; Health Differentials/ Disparities, Later Life; Life Expectancy; Mortality; Population Aging.*

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# ACTIVITIES OF DAILY LIVING (ADLS) AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADL)

SEE Volume 3: *Disability and Functional Limitation, Later Life.*

# ACTIVITY PARTICIPATION, LATER LIFE

SEE Volume 3: *Leisure and Travel, Later Life; Time Use, Later Life; Volunteering, Later Life.*

# AGE, PERIOD, COHORT EFFECTS

Life course and human development research has long concerned itself with time-specific phenomena that can be represented in age, period, or cohort (APC) effects. The search for these effects—APC analysis—permeates sociological, demographic, and epidemiologic studies of aging and the life course. Because APC analysis has the unique capacity to depict the entire complex of social, historical, and environmental factors that shape individual life courses, its importance for constructing and refining theory, measurement, and analysis can hardly be overstated. This entry briefly introduces the intellectual history of various conceptual and analytic issues in contemporary APC analysis, discusses the consequences and implications of misspecifications of APC effects in previous studies, reviews the state-of-the-art development of APC models in recent research, and concludes with the challenges that remain for studies of APC phenomena in human societies.

## DEFINITIONS OF AGE, PERIOD, AND COHORT EFFECTS

Age, period, and cohort effects all refer to some type of time-related variation in the phenomena of interest, yet they carry distinct substantive meanings.

*Age effects* are defined as variations associated with different chronological age groups brought about by physiological changes, accumulation of social experience, and/or role or status changes. Age effects, therefore, reflect biological and social processes of aging internal to individuals and represent developmental changes across the life course. This can clearly be seen in the considerable regularities of age variations across historical time and place in many outcomes such as mortality, fertility, disease prevalence and incidence, schooling, employment, marriage, and family structure. The identification of age changes is especially important in studies of health and aging because age has been shown to be the most important source of variation in vital rates and has frequently been used to understand the etiology of diseases (Hobcraft, Menken, & Preston 1982).

*Period effects* are defined as variation over time periods or calendar years that influence all age groups simultaneously. Period effects subsume a complex set of historical events and environmental factors such as world wars, economic crises, famine, epidemics and pandemics of infectious diseases, public health interventions, and technologic breakthroughs. Shifts in social, cultural, economic, or physical environments may in turn induce similar changes in the lives of all people at a given point in time. Thus, period effects are evident from a correspondence of changes in demographic events and social and epidemiologic conditions that are expected to influence these events.

*Cohort effects* are defined as changes across groups of people who experience an initial event such as birth or marriage in the same year or years. Birth cohorts are the most commonly examined unit of analysis in demographic and aging research. A birth cohort moves through life together and encounters the same historical and social events at the same ages. Birth cohorts that experience different historical and social conditions at various stages of their life course, therefore, have diverse experiences. Conceived as the essence of social change (Ryder, 1965), cohort effects arise when each succeeding cohort carries with it the imprint of physical and social exposures from gestation to old age that bear on its members' fortunes in a way specific to that cohort. Cohort effects thus represent the effects of formative experiences that subsume both the effects of early life

conditions and the continuous exposures to historical and social factors throughout the life course.

Conceptually distinguishing APC effects is theoretically important in three ways. First, it is crucial for attributions of etiology or social causation. Age effects represent aging-related developmental changes in the life course, whereas temporal trends across time periods or birth cohorts reflect exogenous contextual changes in broader social conditions. Second, this distinction also relates to the generalizability of research findings. In the absence of period and cohort effects, age changes are broadly applicable across individuals in different time periods and cohorts. However, differences among periods and/or cohorts indicate the existence of social forces and exposures affecting changes that are period and/or cohort specific. Third, to the extent that these effects serve as aggregates and proxies for different sets of structural correlates, the distinction is especially valuable for better understanding and identifying the underlying social and environmental factors that are amenable to modifications.

## THE HISTORY OF AGE, PERIOD, AND COHORT EFFECTS

Although studies of age and time variations have long existed in the history of science, those that jointly consider age, period, and cohort variations as distinct entities appeared in the scholarly literature only relatively recently. Examinations using APC analysis are most common in demographic studies of human population and have been most rigorously developed in analyses of mortality (Hobcraft et al., 1982). The earliest attempts can be found in descriptive studies of 19th-century English death rates that clearly indicated the importance of cohort variations, relative to period variations, in projecting mortality (Derrick, 1927; Kermack, McKendrick, & McKinlay, 1934). The relevance of this approach was then recognized in subsequent epidemiologic investigations of public health issues, the earliest of which is the well-known study on tuberculosis mortality conducted by Frost (1939). Frost's study emphasized the influence of early life conditions, rather than current conditions, on cohort experiences for a disease that has long latency. The usefulness of APC analysis demonstrated by these early studies and the convenience of using simple indicators that are widely available in many kinds of data facilitated the quick spread of APC analysis not only in the demography of mortality and fertility but also in the epidemiology of diseases. Although APC analysis has taken root in these two fields relatively independently of one another, the common interest and similarities in the development of analytic techniques unite them as one cottage industry.

Early studies mostly relied on descriptive analyses such as graphical displays of age-standardized or age-specific data by time period or birth cohort. They are useful for providing *qualitative* impressions about temporal patterns, but they provide no *quantitative* assessment of the sources of change. The question of how these factors simultaneously operate to shape the observed patterns require the use of statistical regression modeling (Kupper, Janis, Karmous, & Greenberg, 1985). The first successful implementation of a statistical model for APC analysis was by Greenberg, Wright, and Sheps (1950), who found statistically significant variations that can be attributed to all three effects.

The APC accounting or multiple classification model was more fully developed by Mason, Mason, Winsborough, and Poole (1973) and has served for over three decades as a general methodology for estimating separate APC effects using conventional linear regression models. Mason and associates also formally defined the model identification problem that is induced by the unique relationship between the three variables: period = age + cohort. A vast literature in demography, biostatistics, and sociology subsequently used this methodology, with only the solutions to the identification problem varying (Hobcraft et al., 1982). Differences among these solutions often produce ambiguous and inconsistent results. Researchers do not agree on methodological solutions to these problems and have concluded that APC analysis is still in its infancy (Kupper et al., 1985; Mason & Wolfinger, 2002).

## DISENTANGLING AGE, PERIOD, AND COHORT EFFECTS: ILLUSTRATIVE EXAMPLES

Disentangling APC effects in empirical analysis is without a doubt an arduous task. Failure to attend to this confounding problem, however, can constitute model misspecification and seriously bias one's understanding of the true social and biological processes that generated the observed data. The following examples illustrate this point by showing how omitting one or more factors leads to differences in inference.

First, some widely embraced images of the baby boom cohorts do not mean the presence of cohort effects. For example, the *boomers* have been frequently conceived of as the innovators rewriting the rules and remaking society. They have also been thought of as the *Me Generation,* which consists of self-indulgent consumers obsessed with health and youth and rely on products such as Botox or Viagra to fight against the effects of biological aging (Hughes & O'Rand, 2004). Although it is intuitively appealing to attribute these as cohort effects, they could have been driven by other forces that are independent of cohort effects, such as period changes. One key assumption on which the expectation of cohort effects rests is that individuals do not change their attitudes and behaviors in response to changes in political, economic, or social context over time. It is possible that

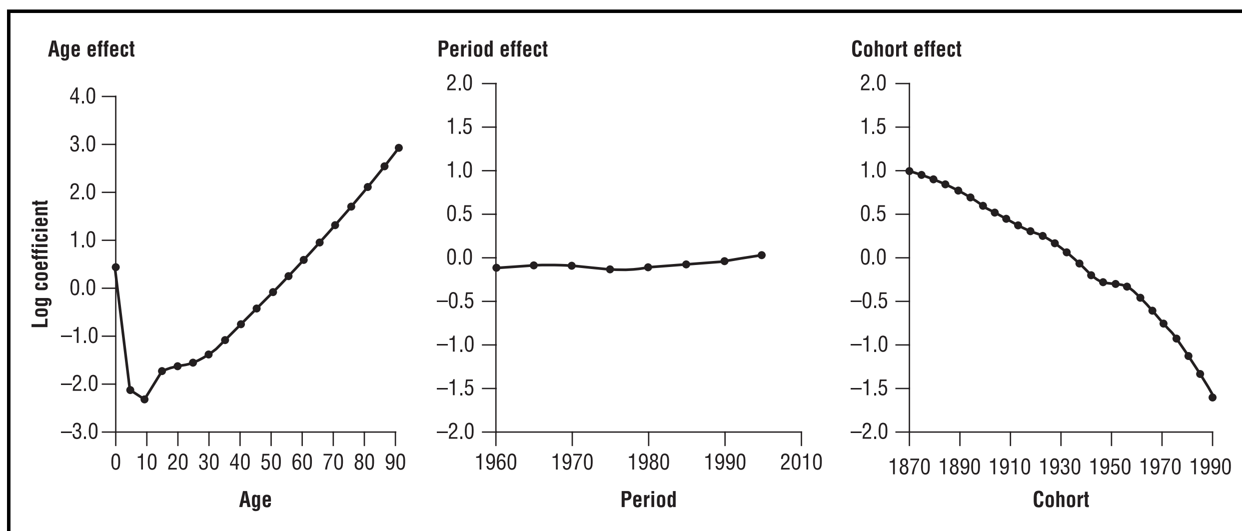


***Figure 1.*** *Hierarchical APC model estimates of age, period, and cohort effects on U.S. verbal ability: GSS 1972–2000.* CENGAGE LEARNING, GALE.

the characteristics observed in the baby boomers have resulted from their adaptations to period conditions. Such period conditions could have also changed other cohorts in a similar way.

Consider another case in which one omits cohort effects in studies of temporal trends in adult mortality in the United States. Substantial mortality declines in the United States for a large part of the past 100 years have been widely documented. However, the sources of mortality reductions in the most recent 50 years are not well understood. Empirical investigations are usually confined to changes in age and/or period trends. The cohort effect is less frequently tested. If it is present, then it implies that certain assumptions currently employed by demographers and other social scientists can be misleading. For instance, it is frequently assumed that rates of mortality declines over time are equal across birth cohorts. It is also assumed that these declines depend on rates of change in period-specific conditions such as economic advance and health care technology that are independent of birth year. These assumptions ignore cohort effects and greatly simplify estimations, but they are increasingly inconsistent with the accumulating evidence of cohort differences in a variety of health outcomes that predict mortality. Recent APC analyses, conversely, relate these temporal patterns of mortality to specific demographic components by delineating APC effects (Yang, Fu, & Land, 2004). They provide new evidence of persistent cohort differences in mortality rates—namely, the substantial survival improvements across most birth cohorts. As shown in Figure 1, the most striking finding is the dominance of cohort effects in explaining recent trends of mortality reductions. Period effects are generally small or modest when birth cohort and age effects are simultaneously controlled in the analysis. Thus, the role of cohort effects in recent mortality declines suggests that the assumptions employed in previous studies are untenable. This undeniably has serious implications for measurement and analysis in future research.

A third example is confounding cohort and aging effects in the life-course study of mental health. Is old age depressing? Most cross-sectional studies found that depression changes with age. However, findings are inconsistent with regard to the direction of this relationship. This inconsistency has been referred to as a *scientific myth*. Cross-section data, however, do not substantiate real-time aging as a risk factor for depression, nor do they suggest true life course changes of individuals. More important, age and birth cohort differences are confounded and cannot be disentangled with observations obtained at a point in time. Using longitudinal data with multiple follow-ups and statistical models that distinguish the age and cohort effects, Yang (2007) found evidence of substantial cohort variations in age trajectories of depression. Earlier cohorts have higher levels of depression on average (Figure 2), which are largely due to their lower levels of education and income relative to more recent cohorts. Taking this cohort effect into account explains away the aging effect.

## AGE-PERIOD-COHORT MODELS: NEW DEVELOPMENTS AND CHALLENGES

The conventional linear model of additive APC effects (Mason et al., 1973) has been the most widely used model

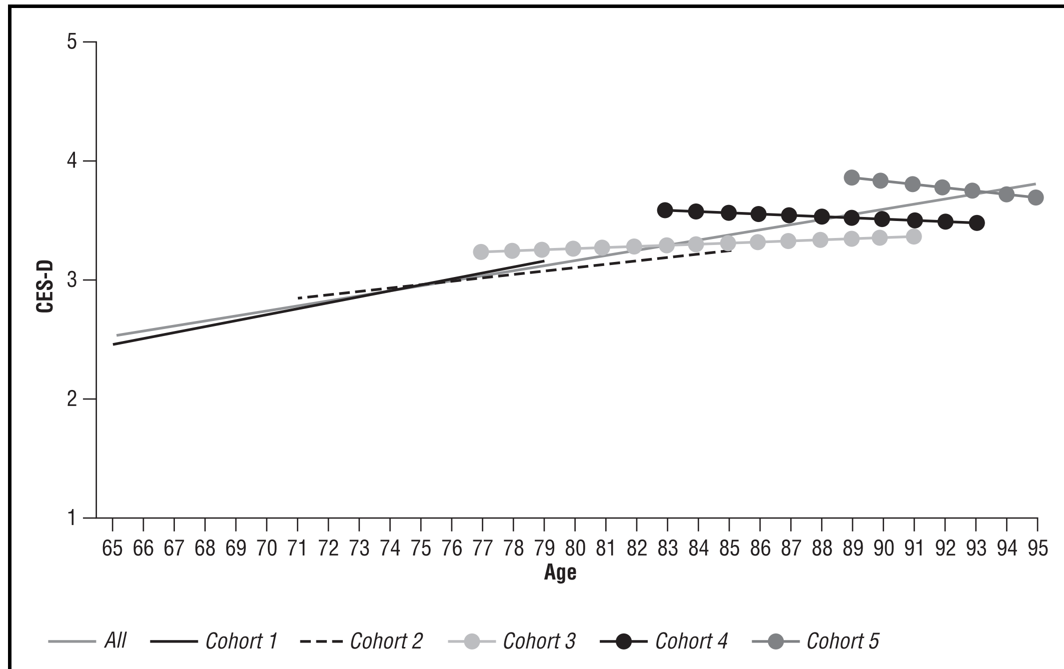


***Figure 2.*** *Expected Growth Trajectories and Cohort Variations in Depressive Symptom (CES-D) Scores.* CENGAGE LEARNING, GALE.

for analysis of tabular population level data. As mentioned already, one has to resolve the identification problem by imposing certain identifying constraints to estimate such a model. The most common approach to solving this problem is to place at least one equality constraint on two or more of the age, period, or cohort coefficients. For example, one can constrain the effect coefficients of two adjacent age groups, periods, or cohorts to be equal to identify the model (see, e.g., Mason & Smith, 1985; Yang et al., 2004). The main criticisms of this approach and its variants are that (a) different equality constraints yield different effect coefficient estimates but identical model fit and (b) estimates of the effect coefficients and thus of the patterns of change across the age, period, and cohort dimensions are sensitive to the choice of the identifying constraints that depends on strong a priori or external information that rarely exists or can be well verified (Mason & Wolfinger, 2002).

The problem with much of the extant literature is that there is a deficiency of useful guidelines on how to conduct an APC analysis. Rather, the literature often leads to the conclusion that it is either impossible to obtain meaningful estimates of the distinct contributions of age, time period, and cohort to the study of social change or that conducting an APC analysis is an esoteric art that is best left to a few skilled methodologists. New models and methods have been developed to redress this situation for three common research designs in social science research. These developments not only have better addressed the limitations in conventional APC models but also have extended the reach of APC analysis to a new family of models. They consist of (a) a new statistical estimator, called the Intrinsic Estimator, for estimating the conventional APC multiple classification models for the aggregate population level data on occurrence/exposure rates (Yang et al., 2004); (b) a hierarchical or mixed (fixed and random) effects model for repeated cross-section sample surveys with multilevel data (Yang & Land, 2006; Yang, 2006); and (c) a hierarchical or individual change model for accelerated longitudinal cohort data (Miyazaki & Raudenbush, 2000; Yang, 2007).

The APC identification problem is inevitable only under the specification of conventional linear models of fixed APC effects that are assumed to be additive. However, additivity is only one approximation to the process of how social change occurs. The models described above in items (b) and (c) bypass this problem by specifying nonlinear models for multilevel data, thereby allowing researchers to capture the contextual effects of cohort membership and historical time on a wide range of social demographic processes. In addition, the possibility of testing explanatory hypotheses using these kinds of models greatly enhances researchers' ability to construct theories about the specific social forces that produce general cohort and period trends.

The developments summarized above mark the beginning of a new era of APC analysis. New models and methods

are needed for testing other theories of social change. Two prominent examples (Hobcraft et al., 1982) that need additional methodological development are (a) *cohort-inversion models* that suggest that cohorts experiencing exceptionally adverse or beneficial events early in life will respond inversely later in life and (b) *continuously accumulating or evolving cohort effects models* that suggest that, contrary to what conventional linear models assume, cohorts are continuously exposed to influences that alter their developmental trajectories over the life course. There currently are few, if any, statistical models with which to apply these conceptually appealing models. The development of such analytic devices and tools thus should be a priority for future research.

**SEE ALSO** Volume 3: *Aging; Cohort.*

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***Yang Yang***

# AGE IDENTITY

The concept of age identity refers to the inner experience of a person's age and aging process. Age identity is the outcome of the processes through which one identifies with or distances oneself from different aspects of the aging process. In scientific research a person's age identity is measured with questions such as "How old do you feel?"; "To which age group do you belong?"; and "How do you perceive and understand your own aging process?"

Age identity belongs to the domain of the subjective experience of aging. Key measures of age identity thus are subject to personal biases and misinterpretation, yet researchers in the field of gerontology have long taken the personal experience of one's own age and aging process to be a subject worthy of investigation. Different aspects of age identity have been studied empirically since the 1950s (Barak & Stern, 1986). There are two reasons why it is important to study this topic. First, age identities, however biased they may be, have important consequences for individual development over the life course. Second, age identities represent visions of aging that come from older persons. It is important to highlight these perspectives in research, as they are not paid much attention in contemporary society.

## FEELING YOUNG

Consistent with the saying that "you're only as old as you feel," one of the most widely replicated findings in age identity research is that older individuals tend not to feel old. In 1986 S. R. Kaufman conducted a series of in-depth interviews about the personal experiences of aging. Despite changes in their physical and social functioning, many older persons had a strong inner experience of continuity that was not affected by their rising chronological age. Kaufman concluded that older people have an "ageless self." Many older persons also do not feel that they belong to the elderly age group and tend to see

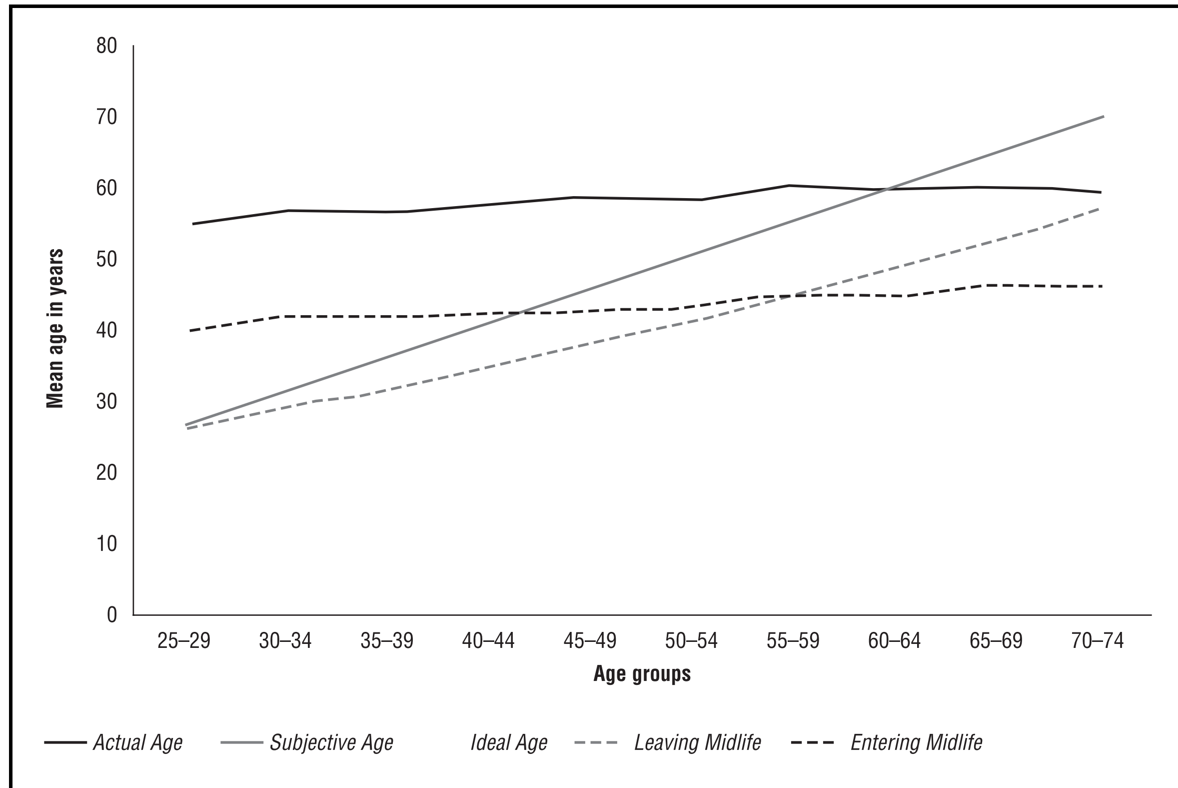


***Figure 1.*** *Different aspects of age identity as compared to actual age.* CENGAGE LEARNING, GALE.

themselves as doing better than their peers. In general they see themselves as an exception to the general belief that aging is related to decline.

Many studies have shown that older individuals feel younger than their chronological age. Figure 1 illustrates this phenomenon by using data from the study on Midlife Development in the United States (MIDUS), one of the few nationally representative American surveys that have measured age identity. The figure shows the mean actual age and the mean subjective age for 5-year age groups. It can be seen that in the youngest age group (25 to 29 years old) there is almost no discrepancy between one's actual age and one's felt age. Each consecutive age group has a younger age identity, up to the oldest individuals, who feel about 13 years younger than their actual age. This pattern has been found consistently in studies comparing different age groups (Barak & Stern, 1986, Westerhof, Barrett, & Steverink, 2003). However, when the same individuals are followed over time, it is found that not all individuals experience an increase in perceived youthfulness; unhealthy people tend to feel less young (Uotinen, Rantanen, Suutuma, & Ruoppila, 2006).

To understand why older people tend to feel younger than their actual age, it is useful to look at the standards individuals use in judging their subjective age. An important standard is people's ideal age: how old individuals want to be. This is an important standard because it provides information about how satisfied older persons are with their chronological age (Uotinen et al., 2006). It can be seen in Figure 1 that the average ideal age is much lower than the chronological age. On average, persons in the oldest age group (70 to 74 years old) want to be almost half their actual age and therefore appear to be very unsatisfied with their age. It also can be seen that individuals on average want to be younger than they actually feel.

Another standard that individuals use in judging their own subjective age are their ideas about when a person enters or leaves a certain stage in the life course. Individuals who participated in the MIDUS study were asked to report the age at which they believe men and women enter and leave middle age. On average, midlife was believed to start at age 44 and end at age 59. In each age group, the mean ideal age is below the age of entering middle age and the mean subjective age is below the age of leaving middle age. Individuals want to be younger than midlife and do not feel older than midlife. It can be concluded that individuals have much younger age identities than their objective age, and their norms about midlife provide support for these perceptions.

## PSYCHOLOGICAL PROCESSES

How can this bias toward younger age identities be understood? Life-span psychologists have described the phenomenon of feeling younger than one's actual age as resulting from a process of adaptation to age-related changes (Sneed & Whitbourne, 2003). When individuals are confronted with age-related changes such as the loss of paid employment and the onset of physical decline, they may strive to maintain their existing identity. For example, when an individual who sees himself as an athlete is confronted with limitations in his physical mobility, he may strive to overcome those limitations by exercising and thus maintain his identity as an athlete. This process is called assimilation. Conversely, an individual may react to new experiences by changing her identity, a process called accommodation. In this case the athlete may give up her identity and search for a new one, for example, being an artist or a writer. From this developmental perspective, feeling younger than one's actual age is the result of an assimilation process that maintains an existing identity.

From a psychological perspective, researchers have argued that motives such as self-continuity and self-enhancement may shape age identity. Self-continuity refers to the desire and motivation to remain the same person over time. Identifying with the younger ages one has been thus results in a feeling of consistency with one's past. Self-enhancement refers to the motive to maintain or increase a positive image of oneself. Youthful identities are a way to satisfy this desire in a culture that associates aging with decline and associates youth with vigor and physical attractiveness, reflecting prevailing negative cultural images of old age in American society.

## CULTURAL CONTEXTS

According to modernization theory, cultural changes create a social context in which youth is a more valued status than old age. For example, historically, the status of older persons declined as a result of increases in literacy and the dissemination of information through formal educational systems and the mass media, which deprived the elderly of their traditional advantage in knowledge. Because there were no systematic observations on age identities in earlier historical periods, it is impossible to assess whether modernization resulted in an increase in the youthfulness of the identities of older persons. However, cross-cultural studies have shown that there are differences in age identities that are based on the way modernization processes unfolded. Although individuals in many cultures tend to feel younger than their actual age, the discrepancy and the age differences are less pronounced in European and Asian cultures than in the United States. For example, a nationally comparative study showed that 74-year-olds feel about 8 years younger in Germany, compared with 14 years in the United States (Westerhof, Barrett, & Steverink, 2003). These differences were attributed to differences in welfare systems and individualistic values resulting from differences in the modernization process in the two countries.

## INTERINDIVIDUAL VARIATION

The focus on average age identities across large groups of persons conceals the fact that there is also clear variability between individuals. Although about three-quarters of Americans feel younger than their actual age, the MIDUS study shows that 15% feel about the same age as they actually are and that 10% feel older than their chronological age. How can this individual variation be understood?

From a life-course perspective, cultural norms provide guidelines for what is considered the optimal chronological age at which life transitions should occur. For example, people judge whether marriage, parenthood, or retirement happens on time or whether an individual is too young or too old for it. In general, when there is a cultural age norm for a particular transition, one can expect that those who experienced that transition will feel older than those who did not. The most consistent evidence for this line of reasoning is found for physical health. Individuals who have poorer health have a less youthful age identity than do their age peers who are in better health (Barrett, 2003). In a culture that largely equates aging with physical decline, individuals tend to use their physical health status as an indicator of their personal aging process. A few studies have examined other life-course transitions, such as the empty-nest phase, retirement, widowhood, and grandparenthood. Although the findings are inconclusive, they tend to confirm that these transitions and their timing in the life course are related to older age identities.

However, life-course transitions tend not to occur at a single uniform age. Life-course theorists have documented that the timing and nature of transitions vary with one's social position, such as socioeconomic status, gender, and race. For example, persons of lower socioeconomic status (less education, less income, and lower-status jobs) experience a pattern of cumulative disadvantage over the life course as well as a temporally more compressed life course; that is, they experience life transitions during a shorter, more densely packed period. Thus, one might expect that persons from backgrounds with lower socioeconomic status have older age identities in that they experience health problems and major transitions such as marriage, parenthood, and grandparenthood earlier than do their wealthier peers. This has been found in many studies. The relative health disadvantage of those with lower status is the most important explanation for this finding (Barrett, 2003).

From a feminist perspective, it has been argued that women in Western cultures suffer from a double standard of aging. Whereas aging comes with grace for men, it comes with disrespect and disregard for older women.

One therefore might expect that women will try to escape this double standard by overstating their own youthfulness more than men do. Few if any empirical studies provide support for this hypothesis, however. Similarly, one might expect that ethnic minorities feel older than Whites, as they have disadvantages similar to those of persons in lower socioeconomic positions. Growing older might pose double jeopardy to aging ethnic minorities that might make them feel even older. However, few studies have assessed this proposition rigorously.

## INTRAINDIVIDUAL VARIATION

Life span psychologists emphasize that the aging process is multidirectional and multidimensional; in other words, there is a balance between gains and losses in different life domains, such as family, health, and personal development. Therefore, it might be expected that one's age identity is more complex than a simple snapshot measure of whether one feels older or younger than one's chronological age.

Qualitative studies of age identities have revealed that individuals perceive both losses and gains in their personal aging process (Keller, Leventhal, & Larson, 1989). In a nationally representative study of middle-age and older persons in the Netherlands, respondents completed two sentence stems: "what I like about getting older . . ." and "what I don't like about getting older . . ." (Westerhof, 2003). Negative perceptions of aging mainly concern physical and social decline. Physical decline is experienced in terms of increasing vulnerability, a loss of vitality, and complaints about specific functional losses such as losses in mobility, vision, and hearing, which are attributed to normal aging. Social losses pertain to the death of loved ones, the loss of independence, and the loss of respect in society. Positive perceptions of one's own aging process were found mainly in social and psychological functioning. The increasing freedom and autonomy, the continuity of relationships, and the birth of grandchildren are the most important social gains, whereas increases in life experience, wisdom, and tranquillity are the most frequently mentioned psychological gains.

In an effort to incorporate these more complex aspects of age identities into gerontological research, researchers have developed and used multidimensional instruments. For example, the frequently used cognitive age measure (Barak, 1987) characterizes subjective age as feel-age ("I feel as though I am . . ."), look-age ("I look as though I am . . ."), do-age ("I do things as though I am . . ."), and interest-age ("My interest are mostly those of a person of . . . years"). Although the answers to these questions are related, individuals may have a feel-age that is different from their look-age, do-age, or interest-age.

New multidimensional measurement instruments have been designed to capture perceptions of different aspects of the aging process. For example, Steverink, Westerhof, Bode, and Dittmann-Kohli (2001) developed an instrument for measuring the experience of one's own aging in terms of physical decline, social loss, and continued personal growth. Older persons experienced more physical and social decline in their aging process than did middle-aged persons and also felt that they had fewer opportunities to continue their personal growth.

In addition to exploring the different domains that shape age identities, researchers have investigated the ways in which social context affects those identities. Symbolic interactionism is a sociological framework that focuses on the ways individuals present themselves in different social interactions in their daily lives. Nikolas Coupland and Justine Coupland (1995) reported a case study of May, a 79-year-old woman. In a conversation with a woman her own age, May presented herself as active and independent, resisting stereotypical images of older persons. In a conversation with a 38-year old woman, however, May suddenly offered a negative portrait of herself, confirming stereotypical images of being old and dependent. These different ways of presenting oneself are related to who has the initiative in the interaction and to the infantilizing mode of communication of the younger partner.

## THE IMPORTANCE OF AGE IDENTITY FOR LIFE-SPAN DEVELOPMENT

As a potentially biased interpretation and characterization of one's own aging process, age identity has important consequences for one's further life-span development. Psychological theories of self-continuity and self-enhancement suggest that one's age identity is typically younger than one's chronological age and that younger age identities are related to mental health and well-being. Many studies have supported this expectation (Barak & Stern, 1986; Steverink et al., 2001). Well-being often is taken as the outcome of successful aging; thus, these studies suggest that age identities are related to a successful outcome of the aging process. However, existing studies have not shown definitively whether age identity influences mental health or mental health affects age identity in later life.

Research shows persuasively that good physical health is one of the strongest correlates of youthful age identities. Although physical health may affect age identities, the causality also may be reversed: One's age identity may affect one's physical health later in life. Studies have shown that more positive self-perceptions of aging and more youthful age identities are related to better health over time and even to longevity (Levy, 2003).

Perceptions of one's aging process have important consequences for one's further psychological development,

physical health, and even mortality. However, individuals' denial of aging may contribute unwittingly to the perpetuation of cultural beliefs about old age as a period of decline at the societal level. It is therefore important to construct identities of old age that are positive in and of themselves.

**SEE ALSO** Volume 3: *Ageism/Age Discrimination; Self.*

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# AGE SEGREGATION

*Age segregation* refers to the separation of age groups in society. This separation may be physical, in terms of spatial location, or social, in terms of social networks and supports. The separation of age groups can reduce contact between younger and older persons. Because segregation separates members of groups, age segregation may perpetuate stereotypes between generations by limiting opportunities for them to interact. Age-segregated social networks limit the exposure of individuals to others who are not their age. At the same time, age-homogeneous social networks may be perceived as biased or discriminatory because social networks serve to integrate individuals into the greater social context and provide opportunities.

## AGE SEGREGATION AND THE LIFE COURSE

The impact of age segregation varies across the life course. Segregation from other age groups is quite high for younger persons due to the time they spend pursuing education. On entering the workforce, age segregation decreases. As individuals age and retire they may once again become more separated from other age groups. Hence, exposure to age segregation is most common at the younger ages and then later in life. With the aging of the baby-boom cohort and the growth in sheer numbers of older persons, scholars and practitioners are increasingly interested in "age integration," the bringing together of persons of all groups as well as the breaking down of age-based structures in society (Riley & Riley, 2000). By understanding how social structures shape lives, life course researchers are able to distinguish a transition to an increasing degree of age integration in social contexts such as education and work (Riley & Riley, 1994).

Age segregation occurs at multiple levels in society. Individuals are embedded in social contexts. Those social contexts tend to shape their access to other individuals and resources in society. It is well established that individuals are attracted to and associate with others who are like themselves. The principle of homophily suggests that individual's social networks are sorted by characteristics including age, race, and gender. This tendency toward homogeneous networks implies that individuals who are dissimilar will be less likely to maintain relationships (McPherson, Smith-Lovin, & Cook, 2001). Although social networks are likely to be age homogeneous, family-based social supports will vary over the life course (Burt, 1991). Younger adults may turn to their parents for social support. As they age, the focus may shift from parents to their own children.

In the life course context, transitions may be either gradual or discrete. Age is an example of a gradual component of change across the life course and marital status is an example of a discrete transitional stage. Because age is closely related to marital status, the spatial clustering of groups (such as younger married couples in suburbs) can contribute to age segregation in social networks (Kalmijn

& Vermunt, 2007). Age boundaries tend to be stronger among younger adults and women. Possible explanations for this include increased age integration associated with the transition from school to the workforce and the persistence of gender roles associated with child rearing. Although age segregation may be distinguished in terms of individual and group-level network characteristics, age segregation can also be identified in spatial contexts such as residential communities or occupational distributions.

## MEASURING AGE SEGREGATION

Age segregation can be measured using traditional spatial segregation measures as well as through social network analysis. Typically, the preferred method depends on the dimensions of age segregation being measured and the focus of the particular study. The analysis of residential segregation is based on characteristics that may be either ascribed, such as age or race, or achieved, such as economic status. Researchers have refined a number of measures of residential segregation based on the spatial distribution of characteristics.

Scholars of residential segregation distinguish between five distinct dimensions of segregation: evenness, exposure, concentration, centralization, and clustering (Massey & Denton, 1988). One of the best-known measures of residential segregation, the index of dissimilarity, is a measure of evenness. In the age segregation context, it would measure the extent to which different age groups are distributed among dimensions such as neighborhoods or occupations. The index of dissimilarity ranges between zero and one (zero representing no segregation and one representing complete segregation) and is often interpreted as the proportion of one group that would have to move between areas (or occupations) to create an even age distribution.

Other commonly used measures of segregation include the isolation index and correlation ratio, which measure exposure. The isolation index could be used to measure the extent to which one age group has contact with another age group in an area. The correlation ratio measures the degree to which an area is composed of age-homogeneous units. In segregation studies, measures of concentration, centralization, and clustering are related concepts representing the physical space occupied by a group and the adjacency of the group's space to other groups. Researchers have increasingly recognized that no single summary measure fully characterizes all dimensions of spatial segregation (Reardon & O'Sullivan, 2004).

Examining the composition of individuals' social networks, the people they have contact with and to whom they turn to for social support, is another approach to the measurement of age segregation. Data on social networks can be presented descriptively, either in summary tables or through diagrams. Networks diagrams facilitate the visualization of the connections between individuals. There are a growing number of statistical methods used in network analysis (see Wasserman & Faust, 1994).

## CAUSES AND CORRELATES OF AGE SEGREGATION

Age segregation has cultural, social, and spatial contexts. Many Western cultures tend to focus on "youth culture." This focus highlights the language, tastes, and consumption of younger cohorts (Hagestad & Uhlenberg, 2006). A cultural focus on youth may overshadow cohort differences in socialization experiences and exaggerate differences between age groups.

There are both voluntary and involuntary causes of social and spatial age segregation. Voluntary segregation often occurs at the individual or group levels in relation to social networks (or spatial location) and may offer group members supports they might not have access to in the larger society. Involuntary segregation occurs when individuals and groups are denied access to resources or opportunities because of their age. Generally, voluntary and involuntary age segregation can be cast in terms of individual preferences versus age discrimination. In both cases, differential status is assigned to groups based on their age.

Age segregation can occur at any stage of the life course but is most likely at the youngest and oldest ages. Educational and socialization activities are primarily age-segregated for the young. An aging population has contributed to the development of age-segregated retirement communities as well as leisure activities. Involuntary age segregation can be based on either legal justification or socially condoned discriminatory behavior. Examples of involuntary age segregation include mandatory retirement ages as well as the increasing use of long-term care facilities to house the oldest old.

Because social networks are relatively homogeneous, individuals embedded in age-segregated environments will have limited exposure to individuals unlike themselves. They may be unaware of disparities that exist or lack the means to overcome them. For aging adults, an additional consequence of age segregation may be a shrinking social support network. By maintaining ties to family members across generations, older adults are able to increase their age integration and levels of social support (Hagestad & Uhlenberg, 2005).

## PHYSICAL AND PSYCHOLOGICAL CONSEQUENCES OF AGE SEGREGATION

The consequences of age segregation will depend on whether the segregation is at the micro level (individual's

connections and membership in social group) or the macro level (society and social institutions; de Jong Gierveld & Hagestad, 2006). Some key institutions associated with age segregation include education, work (retirement), and leisure (Riley & Riley, 2000). At the individual (micro) level, age segregation is contrasted to age integration and associated with social isolation. At the macro level, age segregation may not necessarily be bad for a group. The type of institution associated with the age segregation and whether the segregation is voluntary or involuntary will influence the consequences of segregation.

Successful aging has been associated with both age segregation and integration. Age-segregated communities are often marketed as life style communities, highlighting amenities and active lifestyles (McHugh, 2003). At the same time, older persons may interact with younger age groups through volunteer activities at schools or in the community. Many large universities increasingly offer programs that encourage lifelong learning. In fact, university towns often seek to attract retirees. Voluntary age segregation is generally associated with successful aging, leisure, and active retirement. The rise of age-segregated retirement communities suggests that voluntary segregation can serve a supportive function for elders. These aging "enclaves" may offer support, social capital, and economic opportunities. Yet voluntary age segregation may also represent a disconnect with previously active social networks and general social disengagement. In this situation it can have negative effects on the individual, including psychological stress or depression.

In an involuntarily segregated context, groups may have little or no contact with each other. This lack of contact between groups contributes to the negative consequences associated with segregation through both lack of exposure and unequal access to resources. Many of the negative consequences of segregation result from the extent to which involuntary segregation is embedded in the social fabric. As an individual ages, there may also be cumulative effects of advantage or disadvantage that have accrued over an individual's life course. For example, the cumulative effects of an individual's gender, race, ethnicity, or economic status may mean that some individuals are advantaged as they age whereas others may need more supports. For the less advantaged, age segregation may exacerbate their lower levels of social integration, poorer health, and greater potential for loneliness and depression.

## AGE SEGREGATION AND INDIVIDUAL EXPERIENCES

The segmentation of the life course into three broad periods (education, family and work, and retirement) that are associated with established social institutions has contributed to age segregation over the life course (Hagestad & Uhlenberg, 2005). As the workforce ages, ageism, or age discrimination, at work becomes a greater concern. Traditionally older workers would socialize younger workers, teaching them how to function in the workplace. With the increasing prevalence of technology, younger persons may have stronger skills (Uhlenberg & de Jong Gierveld, 2004). Older workers are more likely to have stronger credentials, whereas the changing nature of the labor force may make younger workers more attractive to employers (MacLean, 2006). Both older and younger workers experience more stereotyping and less power than middle-aged adults (Nelson, 2002).

The aging of the baby-boom cohort has raised concerns about age segregation and discrimination. To the extent that residential patterns are associated with the family life course, unmarried younger adults are more likely to cluster in urban areas whereas married couples may move to suburban areas to raise their families. Older adults may age in place, either in a neighborhood or community. In rural areas, the out-migration of younger age groups may leave the older generations behind. The absence of stable, ongoing interactions between age groups can contribute to a lack of age integration that, in turn, may contribute to increased ageism (Hagestad & Uhlenberg, 2006).

Increases in age segregation may have important consequences for the well-being of community members. To the extent that segregation contributes to discrimination, the consequences of age segregation can have significant physical, psychological, and financial costs for both individuals and communities.

## THE FUTURE OF AGE SEGREGATION

Age segregation is most likely to occur in the early and later stages of the life course. Children are segregated in school by age. Cohorts of children progress through the educational system together. Age integration increases as young adults enter the workforce. On retirement, older adults may have fewer nonfamily connections, and, outside their family interactions, the age integration of their social networks may decrease. With the population aging and the increasing proportion of older persons in many developed societies, researchers and policy makers will need to understand the factors that contribute to both age segregation and age integration over the life course.

Some important research issues to be addressed include the costs of age segregation for communities and societies, whether age-restricted residential communities create or decrease support for elders, and whether increased life expectancy and aging populations will contribute to greater segregation. Such studies should also assess the heterogeneity of social networks across the life course. It has been suggested that greater age integration

in a society will promote a more civil society (Riley & Riley, 2000; Uhlenberg & de Jong Gierveld, 2004). A better understanding of the costs and benefits of age segregation across the life course will enable researchers and policy makers to better address the future consequences of age segregation for both individuals and society.

**SEE ALSO** Volume 3: *Ageism/Age Discrimination; Aging in Place; Lifelong Learning; Long-term Care; Riley, Matilda White.*

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## AGE STRUCTURE

Age is one of the most significant dimensions of the composition of a population. There are important links between the age structure and the social structure of a society. Understanding the age structure provides insight into the history and future potential of a population. There are several measures and methods for summarizing the age structure of a population and for making comparisons across populations and time.

Demographers use the term *age structure* to describe the distribution of people in a population by age. The current distribution of the population by age is the result of past patterns of mortality, fertility, and migration in a population and evolves over time as those processes change. Populations often are referred to as being young or old. Although those terms do not have precise definitions, a young population is generally one in which a large proportion of the people are below working or reproductive age and there is a large potential for future population growth. In contrast, an old population is one in which a relatively large proportion of the people are past working age and the growth rate is small or potentially negative.

### POPULATION PYRAMIDS

A common way to depict the age structure of a population is through the use of a population pyramid. These figures consist of bar graphs showing the proportion of the total population in each age group (usually presented in 5-year age groups) by sex. The bars are arranged horizontally with males on the left side of the *y* axis and females on the right side. In this manner population pyramids summarize both the age structure and the sex structure of the population in a single visual image.

A population that is growing rapidly will have a younger age structure than will one that has a slower growth rate. This can be seen in the shape of the population pyramid, which has a classic pyramid shape with a wide bottom and a narrow top. The youngest age groups constitute the largest proportion of the population, and each age group is larger than the one above it. This shape comes about primarily as a result of high levels of fertility that add new members to the youngest

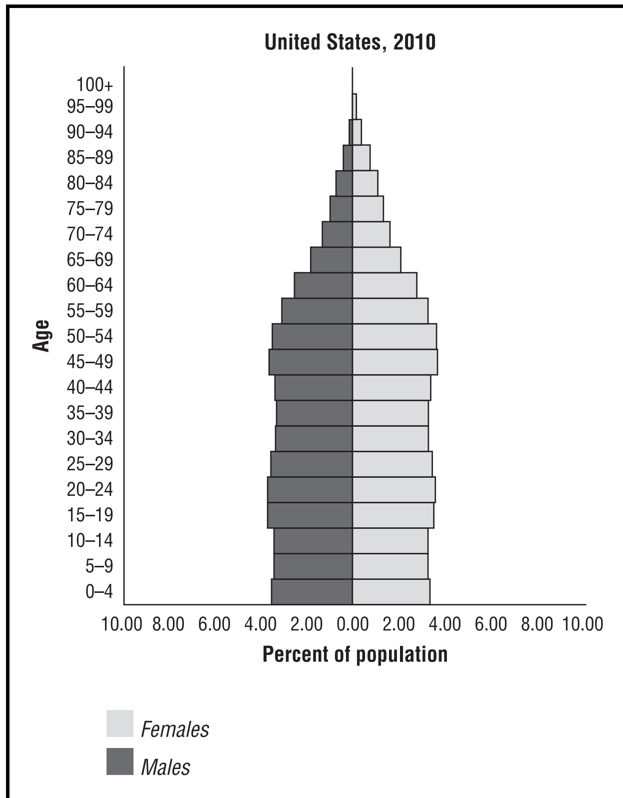


*Figure 1. An estimated population pyramid for the United States.* CENGAGE LEARNING, GALE.

age group. As the younger members age, they enter the reproductive years and, even if fertility rates are falling, create a large number of future births.

A population that is growing more slowly will have a more rectangular shape that represents a relatively even distribution of the population across age groups. In these countries, the base of the pyramid is narrowing and there is little difference in cohort size from one age group to the next. As fertility and mortality levels fall, this rectangular shape emerges. Some populations experience zero or even negative growth. In these cases the base of the pyramid is smaller than the upper age groups because fertility is below the replacement level. (That means that the total fertility rate of an area is not high enough to replace the population.) This creates a pyramid shape that is more barrel- or football-shaped: narrow at the bottom and the top with a bulge in the middle.

## DEPENDENCY RATIO

Another way to summarize the age structure of a population is through the calculation of a dependency ratio. The dependency ratio compares the size of the non-working-age population, both young and old, with that of the working-age population. The age range used to define working is most commonly ages 15 to 64, and the dependent population consists of those under age 15 and those age 65 or older. The ratio of the dependent-age population to the working-age population generally is multiplied by 100 to create the dependency ratio. The higher this ratio is, the more people each individual of working age supports. Countries with high dependency ratios historically are those with high fertility and a large proportion of the population under working age. The higher the dependency ratio, the greater the need for the working-age population to provide economic resources. Dependency ratios of approximately 50 are typical for the United States and Western European countries (Population Reference Bureau, 2007). In this case each dependent is supported by two people of working age. In less developed countries the dependency ratio may be 70 or 80. In those countries each dependent is supported by fewer than 1.5 people of working age.

In young populations the dependency ratio is determined primarily by the relative number of children and youths in the population. As a population ages, the dependency ratio is driven more by the relative size of the elderly population. In the more developed countries the proportion of the population age 65 and older is roughly equal to the proportion under age 15. A more refined measure, the old age dependency ratio, often is used for populations that are aging. Because this index places only those past working age in the numerator, it better captures the dependency needs of aging populations. In the United States this ratio is now close to 20, meaning that there are five people of working age supporting each person over age 65 (Population Reference Bureau, 2007).

## DETERMINANTS OF AGE STRUCTURE

The age structure of a population is determined by the three basic demographic processes: birth, death, and migration. Together those processes shape the age and sex distribution of the population and provide momentum for population growth or decline. Current age structure reflects the past levels and patterns of those processes and the potential for future growth.

Changes in fertility tend to have the most dramatic effect on the age structure of a population. Birthrates determine the number of entrants into a population. Births add new people only to the bottom of the pyramid, but those people stay in the population as they age. For most of history populations had a high proportion of people in the youngest age groups because fertility was very high.

The number of babies born into a population is a function of the number of women of reproductive age (generally 15 to 45 years) and the age-specific fertility rates of those women. If fertility remains constant, large birth cohorts moving into the reproductive ages will create a large number of births. As birthrates fall, the size of the new cohorts decreases. This creates an echo effect in future years as the women in those smaller cohorts reach childbearing age. This smaller group of women, in combination with lower fertility rates, leads to even smaller birth cohorts.

If birthrates temporarily increase, as they did around the 1950s in the United States, an opposite effect—a baby boom—is seen in the age structure. This creates a bulge at the bottom of the age pyramid that travels upward as the cohorts age. The cohorts born before and after the boom are smaller, magnifying the bulge. As the baby boom cohorts reach reproductive age, they create an echo effect as well, this time in the form of a usually smaller baby boom. This boomlet is the artifact of the large number of women in the reproductive ages and occurs even if fertility levels have fallen.

Death rates determine how many people leave the population and at what ages. Because mortality rates are highest among the young and the old, declines in mortality affect those at the youngest and oldest ages to the greatest extent. Mortality declines create population increases at the youngest and oldest ages. In that sense a mortality decline at young ages has an effect on age structure similar to that of an increase in fertility. However, because declines in mortality tend to affect all age groups to some extent, a general decline in mortality without a change in fertility will have only a modest effect on the age structure of the population. In general, declines in mortality create a more rectangular age pyramid.

Unusual patterns of mortality can be detected in the age pyramids of a population. For instance, the effects of war often can be seen in a smaller than expected proportion of older males in a population. Similarly, mortality from HIV creates an unusually high rate of mortality among young men and women in some African populations. This mortality pattern is evident in the population pyramid as a deficit in the expected proportion of the population in the adult ages. Similarly, this type of mortality pattern affects the dependency ratio by decreasing the size of the working-age population.

Migration can both add to and subtract from a population. Migration tends to occur at very specific ages. Most migrants are young adults, and so in-migration adds people to the age structure of the receiving population in a narrow range. In the sending country, conversely, a deficit of young adults is found. These changes have an immediate impact on the age structure, but there is a long-term effect as well because these age groups affect the number of births in the population.

## FEMINIZATION OF OLD AGE

In nearly all countries the relatively longer life expectancy of women compared with men is evident in the larger proportion of females in the older population. This can be seen in the population pyramids of the United States and Italy, where the bars representing females are longer than those representing males, beginning at about age 40. The difference is remarkably evident above age 65. In the United States there were 70 men for every 100 women age 65 and older and 41 men for every 100 women ages 78 or older in 2000 (Hetzel & Smith, 2001). This pattern emerged slowly during the 20th century as mortality improvement was realized faster for women than for men. Men slowly are closing the mortality gap at older ages, and as time goes by, this imbalance in the sex ratio is expected to diminish.

### EFFECTS OF AGE STRUCTURE

These differences in age structure have wide-ranging impacts on a population. As cohorts move through time, their size and characteristics influence the social structure. Younger people in a society have different needs, are treated differently, and have different status compared with those who are older. Those at the upper end of the age spectrum hold a different place in society. As cohorts age, they take with them their characteristics, experiences, and expectations. These differences continue to influence the society throughout the life of the cohort.

Young populations have a large proportion of the population under age 15. A young population can be a resource because its members represent future workers and an anticipated increase in the workforce. At the same time they can stress the economic system. Young members of the population are consumers but not producers. Young populations need services, such as health care and education, that require an economic investment. Those investments can limit investment in industrial development. The social concerns of younger populations are different from those of the adult population as well. In rapidly changing cultures the young may find themselves alienated from traditional cultural ideals and values. This alienation and cultural shift may affect the entire society as those groups age. Some ascribe the major social

changes of the 1960s and 1970s in the United States to the dramatic changes in age structure resulting from the baby boom generation.

Older populations face different sets of problems. As a population ages, the workforce also ages. An aging workforce may be associated with a decline in productivity, although little support has been found for that premise. More significant to a society is the rapid growth of the population over age 65 or, more important, over age 85. The members of this segment of the population have greater needs for health care than do those of other ages, and the stress they place on the health care system can be extreme. In addition, families are often responsible for providing large amounts of informal care to the oldest generation, stressing family resources and having a negative impact on productivity. In the United States and other more developed countries the social services provided for the oldest segment of the population sometimes are seen as competing for investment in younger generations.

Age is only one of the population characteristics that influence society. Sex, race, ethnicity, occupation, and marital status are among the many other factors that can affect the growth of a society, economic productivity, allocation of resources, and culture. Understanding the role of each of these factors and their interaction is important in understanding social change.

**SEE ALSO** Volume 3: *Demographic Transition Theories; Global Aging; Population Aging.*

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# AGEISM/AGE DISCRIMINATION

In 1969, Robert Butler coined the term *ageism*. At that point it joined *racism* and *sexism* as descriptors for irrational biases toward a social group. However, unlike its counterparts, ageism is the only prejudice for which everyone ultimately can become a target. It is a common experience in the later life course that can have a range of negative consequences for its targets.

Ageism is defined as stereotyping, prejudice, and discrimination against people on the basis of age. Stereotyping is the formation of beliefs and expectations about an age group. The age stereotypes underlying ageism generally focus on health, appearance, and cognitive and physical functioning. Although these stereotypes can be both positive and negative, the negative ones tend to be more prevalent in the United States (Palmore, 1999). Prejudice and discrimination, respectively, describe the attitudinal response to and behaviors toward members of that age group that result from the stereotypes. Ageism can be experienced throughout the life span but is most common later in the life course.

## ORIGINS OF AGEISM

Both societal-level and individual-level factors have been said to contribute to the contemporary forms of ageism. On the societal level, modernization, exposure to television, and cultural norms have been found to be associated with ageism. The early contribution of modernization to ageism followed from the invention of the printing press and the Industrial Revolution (Nelson, 2005). The printing press and the related rise in literacy across social classes contributed to the view of elders as less valued in their long-held respected roles as village historians and resources for useful information (Branco & Williamson, 1982). The Industrial Revolution increased the demand for greater mobility of families, frequently eliminating the extended family structure and often leaving elders behind in less developed areas with fewer opportunities to contribute to the growth of society (Stearns, 1986). The growing appreciation of technological skills over experience further displaced elders from their economic roles.

Research suggests that the advent of television also has contributed to ageism. Older characters on television are underrepresented relative to their proportion in the population (Vasil & Wass, 1993). This relative invisibility communicates the idea that older persons are not valuable members of society. Older characters on television are often one-dimensional and serve as comic relief by displaying physical or mental deficits (Kubey, 1980; Montepare & Zebrowitz, 2002). A study found that greater lifetime television exposure is associated with more negative stereotypes (Donlon, Ashman, & Levy, 2005).

It has been suggested that cultural norms underlie ageism. A cross-cultural look at ageism provides support for this societal-level contributor. For instance, modernized countries such as Canada and many Western European countries have experienced historical events and technological developments similar to those that have been suggested to underlie ageism in the United States. Those countries exhibit some of the same cultural norms held in the United States, such as reverence for youth and devaluation of the old (Westerhof & Barrett, 2005).

Consequently, these countries tend to exhibit ageist attitudes and behaviors similar to those found in the United States (McConatha, Schnell, Volkwein, Riley, & Leach, 2003; Palmore, 2004; Westerhof & Barrett, 2005).

Asian countries, in contrast, traditionally have been presented as the antithesis of the United States in terms of their cultural perspectives on aging and expressions of ageism (Levy & Langer, 1994; Palmore, 1999). Asian cultures generally have revered and respected elders because of their age and the experience and wisdom that it represents. This respect has been cultivated over generations through traditions of filial piety (respect and caring for one's parents) and perpetuation of a vertical social structure (Palmore & Maeda, 1985). However, increasing evidence suggests that Asian cultures are becoming less positive toward older adults as they are exposed to European and North American norms and behaviors, in part through television and the Internet, that favor youth and demonstrate prejudice toward older generations (Boduroglu, Yoon, Luo, & Park, 2006).

On an individual level researchers have explored several major antecedents to ageism. First, humans have an innate tendency to categorize the objects, events, and people they encounter (Cuddy & Fiske, 2002). This categorization reduces the amount of information individuals need to process and allows them to make sense of the world more easily. The categories used for groups of people are stereotypes that serve as the basis for initial judgment and interaction with members of specific categories and ultimately lead to the perception of those belonging to categories different from one's own as more similar to one another and thus further removed from oneself. This process can be adaptive by satisfying inherent needs for affiliation and understanding. It also can lead to an us-versus-them mentality, which is suggested to contribute to the development of ageism among the young.

A second individual-level antecedent to ageism consists of implicit processes or automatic cognition without conscious awareness or control (Levy & Banaji, 2002). Theorists suggest that implicit ageism begins early in life in an explicit form, with children observing ageist attitudes and behaviors among adults or in their entertainment sources. Research has shown that children as young as age 6 know the age stereotypes of their culture (Isaacs & Bearison, 1986). Children's continued exposure to and conscious activation of these stereotypes eventually leads to automatic, uncontrolled activation (Levy & Banaji, 2002). The pervasiveness of age stereotypes and the information-processing efficiency achieved through stereotyping trigger and reinforce this implicit ageism throughout adulthood. The strength of the age stereotypes achieved allows the stereotypes to survive both encounters with individuals who contradict them and the transition of individuals to an age at which they become targets of the stereotypes and the stereotypes become self-relevant (Levy, 2003). Put another way, age stereotypes of others can become self-stereotypes.

A third individual-level antecedent to ageism is death anxiety (Greenberg, Schimel, & Mertens, 2002). This fear and the assumed physical and mental decline leading up to death may be one of the fundamental causes of negative ageism. Americans tend to view death as an unnatural part of the life course (Greenberg et al., 2002). Many associate old age with death and consequently fear aging. This may lead to individuals avoiding and belittling older people as a way to circumvent this fear.

## CONSEQUENCES OF AGEISM

The consequences of ageism are numerous and span several domains. Health care is one area in which ageism is particularly prominent. Five key consequences of this ageism are: (a) insufficient geriatrics training for health care professionals, (b) less aggressive preventive care for older patients, (c) less aggressive disease testing and screening of older patients, (d) inappropriate or incomplete treatment of older patients because of failure by clinicians to provide proven medical interventions, and (e) consistent underrepresentation or exclusion of older patients from clinical trials of drugs for which they will be the primary consumers (Alliance for Aging Research, 2003). In addition, older adults frequently are excluded from trials aimed at improving health behaviors (Levy, Kosteas, Slade, & Myers, 2006). They also may experience lower-quality interactions with their clinicians, as there is research suggesting that clinicians are less supportive, patient, and respectful and provide less medical information when interacting with older compared to younger patients (Greene, Adelman, Charon, & Hoffman, 1986).

Ageism is also well documented in the workplace: Its consequences are felt in the form of age discrimination, with older workers less likely to be hired, less likely to be promoted, and more likely to be the earliest victims of company downsizing (McCann & Giles, 2002). Stereotypes of inferior job performance and productivity are thought to lie behind those practices. In fact, research has found that in many settings older individuals are more reliable and productive than their younger coworkers (McCann & Giles, 2002).

The Age Discrimination in Employment Act (ADEA) of 1967, which was amended in 1978 and 1986, has limited overt discrimination in the workplace but has not eliminated age discrimination entirely. In fact, in fiscal year 2006, 16,548 charges of workplace age discrimination were filed with the Equal Employment Opportunity Commission (EEOC), the government agency overseeing the ADEA

(Equal Employment Opportunity Commission, 2007). Of the 14,146 of those charges that reached resolution, the EEOC dismissed more than 60% because of lack of evidence and nearly 20% for administrative reasons. These figures highlight the difficulty of proving discrimination and the lack of effective enforcement of the ADEA.

Ageism also can affect the behaviors of older adults. Stereotypes can become self-stereotypes and ultimately self-fulfilling prophecies, with belief in the stereotypes leading individuals to confirm them (Levy, 2003). For instance, experimental studies have linked negative age stereotypes to cognitive outcomes such as worsened memory performance (Levy, 1996) and physiological measures such as increased cardiac stress (Levy, Hausdorff, Hencke, & Wei, 2000). Stereotypes also have been shown to affect older individuals' reported will to live, with negative stereotypes leading to greater refusal of life-prolonging treatment in hypothetical medical scenarios (Levy, Ashman, & Dror, 1999–2000). Longitudinal studies have corroborated these findings by demonstrating that older persons with more positive self-perceptions of aging reported better functional health status over an 18-year period (Levy, Slade, & Kasl, 2002) as well as extended survival (Levy, Slade, Kunkel, & Kasl, 2002; Uotinen, Rantanen, & Suutama, 2005).

## INTERSECTION OF AGEISM WITH GENDER AND RACE

The experience of ageism can be affected by other social characteristics that affect the life course. Some research suggests a situation of multiple jeopardy in which older adults who belong to another stereotyped group experience a combined effect of the prejudices that is greater than the individual effects (Palmore, 1999). Evidence supports an intersection of ageism with both sexism and racism. The phenomenon among women has been paid particular attention. A clear age-related double standard exists for women so that women are believed to enter middle and old age earlier than men do (Kite & Wagner, 2002). Women thus are stereotyped at a younger age and tend to be the devalued sex when a gender bias is observed. This bias tends to be greatest in reference to physical attractiveness, sexuality, and competence, with older women often thought to be lower on these traits than older men.

The ageism experience of older persons who are part of a racial or ethnic minority group may be particularly challenging (Williams & Wilson, 2001). Older minorities tend to experience greater rates of poverty or near poverty and consequently poorer health and decreased survival. Moreover, the health care consequences of ageism probably are exacerbated among older members of minority groups in light of long-persisting racial differences in access to and quality of medical care. However, older minorities have been found to be higher in certain resources, such as spirituality, that may help them cope with ageism (Taylor, Chatters, & Jackson, 2007).

## FUTURE DIRECTIONS

Research on ageism has evolved over time. The literature, however, is far from complete and has highlighted several issues for future research. More information is needed about how older adults perceive, experience, and report ageism. Questions regarding multiple stigmatized groups also require further exploration. Any future research questions, however, should remain secondary to the ultimate goal of ageism research: reducing ageism or at least ameliorating its effects. The literature suggests several strategies for reaching this goal, including increasing awareness of old age stereotyping, increasing opportunities for high-quality intergenerational interactions, increasing exposure to stereotype-inconsistent information, emphasizing the heterogeneity of older adults, and increasing the involvement of older adults in meaningful social roles such as policy planning (Braithwaite, 2002). The increased awareness of ageism illustrated by the proliferation of research studies and exploration of legislative responses to ageism through the implementation of the ADEA and several hearings of the U.S. Senate regarding ways to address ageism in media, marketing, and health care provides hope of reaching this goal.

**SEE ALSO** Volume 3: *Age Identity; Cultural Images, Later Life.Policy, Later Life Well-Being.*

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# AGING

In 2000, persons age 65 and older comprised about 12.4% of the American population. By 2100 the population of older adults will be about 23% of the total population, nearly one out of every four persons. One reason for the tremendous growth of the older population in the 20th century is the increase in life expectancy among older persons, which is the average number of years an individual can expect to live in old age. As the population continues to age, continued efforts toward a better understanding of aging are essential. Why humans age, how they age, and what happens as age are all important but complex processes related to childhood and early adulthood life. This entry they will outline the fundamental aspects of individual aging, from biological, psychological, and sociological perspectives.

## BIOLOGICAL AGING

Generally, biologists view aging as changes that represent both growth and decline with time. For example, physical development (a sign of growth) occurs from birth to adulthood, while declines in physical functioning are characterized as part of the aging process. *Senescence* refers to the latter of the two processes that marks decline over time and underlies the progressive loss of function with age, which results from an inability to grow and/or repair damages (Williams, 1957). Multiple biological theories attempt to explain aging: why it occurs, how it happens, and who it affects. Programmed theories of aging are synonymous with "why" theories, which denote the driving forces that cause aging to take place. The "how" theories focus on the mechanisms through which we age. Lastly, the "who" theories examine why some individuals or populations age earlier than others.

**Programmed aging** While the importance of biological processes on aging is largely agreed upon, the reason why aging occurs is often debated. Some scientists argue that aging is based on a programmed, molecular clock, whereas others assert that aging is due to random events resulting from an accumulation of physiological insults or damage to the body over time (wear and tear theory). The programmed aging view is supported in the finding of common pathways of aging among various animal models that exhibit similar life trajectories. For instance, the glucose or insulin-like growth factor-1 (IGF-1) pathways are similar among yeast, worms, flies, mice, and humans. These pathways regulate energy and fat accumulation and ultimately affect growth, aging, and mortality. In contrary some researchers argue that aging is due to physiological insults imposed by the environment (e.g., UV-induced damage to DNA) or internal deviations in homeostasis, the maintenance of equilibrium in response to changes in the internal and external environment (e.g., changes in hormone levels or declines in the immune system). Despite this debate, most investigators agree that aging is a result of more than a single cause. Theories of programmed aging suggest that a biological clock drives the process of human development and aging. Proposed explanations of these conserved molecular pathways (e.g., the previously mentioned glucose or IGF-1 pathways found in multiple animal models) include cellular aging and related genetics.

***Cellular aging.*** Cellular aging, an example of programmed aging, is rooted in the discovery that most cellular tissues can divide only a finite number of times. On average, human cells from embryonic tissues stop dividing after fifty cumulative population doublings (CPDs). This phenomenon, introduced by Leonard Hayflick and Paul Moorhead in 1961, is known as Hayflick's limit or replicative senescence (RS) (for further information, see Kirkwood, 1999). Across species, there is an association between the number of CPDs and longevity. For instance, cells from a Galapagos tortoise, which can live more than 100 years, divide approximately 110 times, while cells from mice, which live less than 5 years, divide about 15 times. Moreover, cells from individuals with Werner syndrome (WS), a progeroid syndrome in which individuals undergo accelerated aging, have far fewer CPDs than cells from normal, non-WS individuals. However, exceptions to Hayflick's limit do exist, with some cell lines never reaching RS. These "immortal" cells include embryonic germ cells and cells from tumors.

Biological indicators, or biomarkers, serve as measurements of biological processes that are difficult to observe directly. A potentially universal biomarker of cellular aging (i.e., a marker of cell division cessation), is the enzyme β-galactosidase (SA β-gal) (Campisi, 2003). SA β-gal is a lysosomal hydroblast, an enzyme that aids in the digestion of excess or worn out organelles, that exhibits abnormal behavior in senescent cells and becomes active at a higher pH in senescent cells compared to normal cells (pH 6 compared to pH 4, respectively). Additionally, the percentage of cells undergoing SA β-gal activity (or positive for SA β-gal) increases with CPDs and age; however, immortal cell lines (e.g., HeLa tumor cells) show no association between percentage of cells positive for SA β-gal and CPDs. Using biomarkers, such as SA β-gal, to determine cellular activity could enable the physiologic measurement of cellular aging across species.

***Genetics.*** In addition to cellular aging, genetic influences are another example of programmed aging. The gene that encodes for Apolipoprotein E (ApoE), for example, has been associated with longevity and age-related diseases, such as Alzheimer's Disease (AD) (Vijg and Suh, 2005; Raber, Hugan, and Ashford, 2004). ApoE is a protein involved in cholesterol and lipid transport to neurons. A growing body of research suggests greater associations between AD and specific ApoE isoforms (i.e., a protein with the same function as another protein but encoded by either a different gene or a mutated form of the same gene). For instance, the ApoE ϵ4 isoform has a stronger association with AD compared with the ϵ2 and ϵ3 isoforms. While the precise mechanism behind this remains unknown, it is clear that the ApoE ϵ4 is less effective in binding sterols necessary for neuronal repair, compared to the ϵ2 and ϵ3 isoforms. Further, studies suggest that the ApoE ϵ2 isoform confers a decreased risk of AD. ApoE is only one example of an identified genetic influence on aging and longevity.

A more in-depth review of the genetic influences on aging can be found in a separate entry within this volume.

**How Humans Age** Several mechanisms as to "how" organisms age have been proposed. Most of the theories behind this have come from experimental research that attempts to determine the causes and consequences of aging on physiological systems. In the last two decades, oxidative stress and caloric restriction have garnered substantial attention in the scientific literature.

***Oxidative stress.*** In 1956 Denham Harman first proposed the free radical theory of aging. This theory is based on the idea that oxidative damage, caused by free radicals, accumulates in tissues and cells over time. Free radicals include molecules or atoms with at least one unpaired electron. This unpaired state causes the molecule or atom to be unstable and seek stability by either giving its unpaired electron to another atom/molecule or by taking an electron from another atom/molecule with an unpaired electron. In this sense, free radicals are highly reactive and can cause damage to the important biomolecules, including lipids, proteins, and carbohydrates. Ultimately, this accumulation of oxidative damage (through free radical formation) contributes to declines in physiologic function with age.

In turn, the oxidative stress hypothesis posits that an age-related decline in function is due to the progressive and irreversible accumulation of oxidative damage. Oxidative stress results in molecular damage to living tissues and is found to increase with aging. This vulnerability to damage of DNA, proteins, and lipids, resulted in the evolution of repair systems that protect against these damaging reactive oxygen species (ROS) (i.e., oxygen free radicals). However, these repair systems do not prevent all oxidative damage, giving way to one of the mechanisms of aging.

Mitochondria are membrane-enclosed regions responsible for producing chemicals that cells use for energy. This process occurs through a mechanism called the "electron transport chain," in which electrons are passed between different molecules to produce vital chemical energy. In the final step, oxygen is required, and on occasion, the electron incorrectly interacts with oxygen, thereby producing oxygen free radicals. Hence, mitochondria are likely the link between age-related accumulation of oxidative damage due to ROS and changes in physiologic function related to aging.

***Caloric restriction.*** Calorie restriction (CR) is the practice of limiting dietary energy intake while maintaining nutrition levels. In 1935, Clive M. McCay and colleagues found that CR extended the maximum lifespan (MLS) of laboratory rats and mice by 33%, from three to four years. However, this phenomenon remained relatively under-investigated until the mid-1970s. Since then much research has focused on the biochemical and physiological effects of dietary restriction.

In animal models, when nutrients are readily available, early reproduction, high fecundity, and a shorter life span are exhibited. Conversely, when nutrients are limited and starvation conditions occur, late reproduction, low fecundity, and a longer life span ensue. It is likely that natural selection may play some role in explaining this finding. As a premise, the body requires energy for maintenance and survival. During life, there exists a trade-off between priorities given to self-investment (e.g., during periods of extended starvation or growth and development) and reproduction. Currently, CR is used as a model for understanding the basic mechanisms of aging, due to its robust and reproducible extension of MLS and delay of several age-associated physiological, biochemical, and behavioral changes in a number of non-human species.

It is now known that CR increases the life span across organisms including yeast, rats, worms, mice, and possibly humans. Yeast cells that were grown in nutrient-rich environments lived an average of 6 days; those grown in water or with fewer nutrients lived greater than 17 days; those grown in only 1% potassium acetate, the most restricted environment, lived for years. In comparison to non-CR rodents, CR rodents have also been found to have lower levels of blood glucose, insulin, insulin-like growth factor-1, and inflammation; higher insulin efficiency and resistance to oxidative damage; and lower incidence rates of tumors, kidney disease, vascular calcification, and chronic pneumonia.

While the beneficial effects of CR on non-mammalian taxa are apparent, its effects on humans are still debated. Given the complexity of the mechanisms that affect health and longevity in humans, it is difficult to determine if, and to what extent, the benefits of CR outweigh the energetic and reproductive costs of living in near hibernation. However, some recent studies have attempted to investigate the effects of CR on humans.

Perhaps the most well-known human example of CR is the Biosphere 2 (Poynter, 2006). The Biosphere 2 team lived in a human-made, closed ecosystem in Oracle, Arizona, for 2 years (1991–1992). This eight-member team consisted of individuals who were relatively healthy, with most being young adults. Inhabitants decreased their usual 2,500-calorie intake to 1,800 calories per day. After 6 months, all members had improved levels of physiological state: 15% weight loss, 35% lower blood cholesterol, 18% lower blood glucose, and 18–to 21% (systolic/diastolic) lower blood pressure.

Additionally, favorable changes in biomarkers predictive of human mortality, including dehydroepiandrosterone-sulfate (DHEA-S), body temperature, and insulin levels,

## THIRD AGE

The *third age* refers to the period of life after completing employment and family duties and before the onset of poor health and old age. Given increases in the adult lifespan, reduction in fertility, and, until recently, reductions in age at retirement, this period comprises an increasingly large proportion of the lifespan. The primary proponent of the concept of the third age was Peter Laslett. His seminal work proposed a post-retirement life full of meaning, purpose, and choice (i.e., the third age) that is distinct from the *fourth age,* a stage characterized by decline and decrepitude.

Critics find fault with the subtle implication that attainment of health and happiness depends on engagement in healthy behaviors and those who do not age successfully have not tried hard enough. Furthermore, the popular media have co-opted the concept, conveying the message that buying consumer goods can ensure the attainment of health and happiness in old age. Advocates see the concept as empowering. The concept of the third age may help to promote institutional and normative changes so that newer generations of older persons will have the power to choose a fulfilling lifestyle not tied to meaning found in paid employment.

were found. DHEA-S is a steroid hormone that normally decreases with age. However, in CR-humans, DHEA-S is higher than non-CR humans at the same age. Insulin and body temperature decreased in calorie-restricted individuals as well. Consistent with the beneficial CR effects seen in other animal models, human men with lower temperature, lower insulin, and higher DHEA-S levels had increased survival rates compared to their normal diet counterparts. All in all, CR seems to extend the life span of organisms ranging from yeast to mammals. It may extend longevity in mammals by decreasing both diseases (such as cancers) and inflammation (a response of the body's immune system that protects against infection and foreign bodies, including bacteria and viruses) during aging. However, substantial reductions in caloric intake are difficult to maintain. While the physiologic benefits of CR on yeast and mice are remarkable, it was also found that they lived in states of near hibernation throughout life. Such findings question whether altering metabolic rates in humans via CR is viable and desirable.

**Who Ages** Although aging is inevitable for all, in humans, some populations age more quickly than others. Bio-psycho-social theories attempt to explain who is most vulnerable to adverse changes connected to aging based on person-environment interactions. For example, ethnic minority populations and individuals with low socioeconomic status exhibit both a higher level and earlier onset of age-related disease, including cardiovascular disease and diabetes. To explain this, several theories have been proposed, including the stress theory of aging (Finch and Seeman, 1998). Stress theories of aging suggest that excess stress, due to greater exposure to chronic and acute strains, leads to increased risk for disease and disability. Stress has been involved in disrupting the regulation of several body systems, including the sympathetic nervous system, the immune system, the hypothalamic-pituitary-adrenal axis, and inflammatory responses. Such theories allow researchers to investigate the underlying reasons why health disparities exist across populations and contribute to the overall understanding of aging processes.

### PSYCHOLOGICAL AGING

Some aspects of human psychology undergo changes with age. Psychological aging is not necessarily a series of losses and physiological decrements; rather, aging can also bring improvements in psychological functioning, such as enhanced optimization of positive emotions, or relative stability, as exemplified by personality. Here the authors will describe the relative stability of personality, the positive changes in emotion regulation, and the onset of common psychological disorders with age.

**Personality and Aging** Two different views of personality and aging are presented in trait and growth models of personality development (Staudinger, 2005). Growth models, akin to Erik Erikson's developmental model, suggest that individuals continually adapt to internal and external (i.e., biological and sociocultural) changes in the environment. Such changes allow for personal growth, with the ultimate goal of achieving purpose in life, competence, and wisdom. Conversely, trait models, which are often used in studying personality, focus on individual traits (i.e., dispositional behaviors and attributes) as indicators of personality. These models suggest that personality remains relatively stable after age 30. Studies have shown, however, that a combination of these two models most accurately portrays changes in personality across the lifespan. Simply, both stability and change, or development in personality, occur from adulthood to later life.

Trait models focus on both the structure and content of personality. For instance, personality is measured along the "Big Five" dimensions: extraversion, openness to

experience, neuroticism, conscientiousness, and agreeableness (McCrae and Costa, 1990). While personality generally remains stable with age, some specific changes in each of the "Big Five" dimensions are related to age. Neuroticism, for example, decreases across adulthood but may then increase in late life. With age, there is some decrease in extraversion and openness to experience, while conscientiousness and agreeableness increase slightly. These findings appear to be similar in cross-sectional (studies examining different age groups at one point in time) and longitudinal studies (studies using data at more than one time point, respectively), as well as across countries.

Self-regulation is the set of abilities and skills that an individual uses to monitor experiences and behavior. It is a source of the underlying stability and relatively minor change in personality with age (Staudinger, Kessler, & Dörner, 2006). This view suggests that individuals aim for a relatively constant state across life and utilize self-regulating mechanisms to achieve a state of dynamic homeostasis. Self-evaluation, emotion-regulation, and goal setting are a few examples of methods of self-regulation.

With age, individual may employ compensatory mechanisms of self-evaluation more often, such as reinterpreting reality. Such reinterpretations allow for consistent perceptions of oneself, despite behavioral and experiential changes. Emotion regulation, discussed below, generally does not decline with age, and some increases with age in the balance of positive to negative emotions have been found. Older adults also report greater control of their emotions with age. This may reflect changes in life goals or a shift in priorities from information seeking in younger years to emotion regulation in older adulthood (Carstensen, Isaacowitz, and Charles, 1999). This perspective, known as socioemotional selectivity theory, will be discussed later. Despite experiencing more adverse health events and losses of close friends and family, older adults, on average, maintain their sense of control and agency (Smith & Baltes, 1999). However, this stability cannot be viewed as a moment of standstill, with little growth and learning, but should be seen as an indicator of successful self-regulation.

**Emotions** Compared to younger adults, older adults generally have better emotion regulation and tend to remember negative information less well than positive information (Mather & Carstensen, 2003). Although poorer health conditions are more common among older adults, the shift toward selectively remembering positive instead of negative memories enables them to regulate their emotions and obtain better levels of well-being.

Among older adults, the maintenance of positive levels of affect (the experience of a feeling or emotion) while facing challenging life experiences is a paradox to researchers. This paradox may be explained by three theories of optimization: affective optimization, socioemotional selectivity theory, and differential emotions theory. In 1989 Lawton introduced affective optimization, which states that older adults control their social and environmental surroundings in order to minimize negative contacts and maximize positive situations. As indicated above, socioemotional selectivity theory posits that when the time remaining in one's future is perceived as limited (e.g., in late life and among individuals with terminal medical conditions), there is a reorganization of goals, with a greater emphasis on emotion-regulation as opposed to information-seeking. During this period, close, interpersonal relationships take precedence over educational and career-oriented goals that might have been priorities in earlier life. There is a reduction in peripheral or more distant relationships (e.g., an acquaintance) and a greater focus on core relationships, thereby enhancing and maximizing time spent in positive emotions. This suggests a remarkable adaptive "resiliency" among older adults.

Differential emotions theory suggests that a limited number of primary emotion systems evolved to provide safe, reliable, and automatic ways to deal with states of emergency (Darwin, 1955). These primary emotion systems include negative emotions, such as fear, sadness, anger, and disgust, and positive emotions, such as happiness, interest, and love. The greater positive emotional balance that commonly occurs among older adults reflects the systematic decline in negative emotions over the life course, while positive emotions remain relatively stable or increase slightly. Further, older adults exhibit greater levels of self-control in regulating their emotions, by showing less reactivity when inducted to negative emotions and utilize different defense and adaptation mechanisms. Older adults are more likely to use a defense that gives an abstract meaning to an event or reverses its meaning, while younger adults employ less mature defenses. For example, during times of hardship, older adults are more likely to cognitively reassess the situation toward a more positive light (e.g., view the situation as a valuable learning experience) as opposed to younger adults who more commonly employ escape and avoidance strategies (Diehl, Coyle, & Labouvie-Vief, 1996). Additionally, older adults both recognize and recall fewer negative images compared to positive or neutral images.

**Psychological Disorders** In general, mental health problems, including schizophrenia, anxiety disorders, and major depression, decrease with age. Among adults age 65 and older, only 0.6% have schizophrenia compared to 1.3% of younger adults aged 20. For anxiety disorders, most begin in childhood, adolescence, and early

adulthood, so their onset is much lower among older adults. The average age of onset for major depressive disorder is 25, and it is most common among adults age 25 to 44 and least common among adults age 65 and older. Despite this, older adults are more likely to suffer from mild depression and dementias than younger persons (Woods, 2005). The high prevalence of depressive disorders and dementias in later life have attracted great attention in relation to theory, assessment, and treatment for older adults. The next two sections discuss two major psychological disorders encountered in older adults: dementia and depression.

***Alzheimer's disease.*** Alzheimer's disease (AD), the most common form of dementia, is perhaps the most feared disease of aging, as older adults fear losing their memory and their sense of self while their physical bodies remain intact. AD is the eighth leading cause of death among individuals over age 65 (Alzheimer's Association, 2007). It is a progressive disease involving loss of memory, then of functional ability, and ultimately, loss of life.

Advancing age is the number one risk factor for AD. In 2007, 5.1 million people in the United States were living with AD, and 4.9 million of these individuals were age 65 and older. At age 65, one out of eight people (15%) are estimated to have AD. While the prevalence of AD continues to increase with age, this number dramatically increases for individuals ages 85 and older; such that by age 85, nearly one out of every two people is thought to have AD (Plassman, Langa, Fisher, Heeringa, Weir et al, 2007). Due to declines in death rates after age 65, current and future generations will survive to older ages, where risk of AD is greatest.

The two hallmark abnormalities of AD include beta (B)-amyloid plaques and neurofibrillary tangles (NFTs); however, it is unclear whether these changes cause neuron death or are indicators of a separate, more complex process (DiGiovanna, 2000). Plaques and tangles are present in the brain when the individual is still asymptomatic. As neuron death persists, the individual begins to exhibit declines in short-term memory. Later, declines in verbal and spatial abilities occur, and ultimately, people with AD lose the ability to complete activities of daily living. During the disease progression, brain size decreases, namely in the frontal, temporal, and parietal lobes, in addition to the amygdala, hippocampus, and nucleus basalis.

Common patterns of symptom progression among individuals with AD have been documented and modeled into a progression of "stages." Although staging systems provide a useful frame of reference for understanding how the disease unfolds in the population, it is important to note that not all individuals with AD will experience the same symptoms nor progress at the same rate. Key symptoms characterizing seven stages of AD are indicated below (Reisberg, 2008).

In Stage 1, no impairments in memory are evident during medical interview. The individual appears to have normal cognitive function but plaques and tangles may be detected via other means, such as functional magnetic resonance imaging (fMRI). Individuals in Stage 2, with very mild cognitive decline, may notice some memory lapses, especially in forgetting familiar words, names, or location of keys or eyeglasses. However, these problems are not noticeable to friends, family, co-workers, or upon medical interview. Mild cognitive decline (Stage 3) can be diagnosed in some individuals. Family, friends, and co-workers begin to notice problems in the AD individual, and problems with concentration and memory are now measurable in medical testing. Some common difficulties include: problems recalling words or names of people, retaining little material from recently read passages, losing or misplacing valuable objects, and performance issues in social or work settings.

Medical interviews of people with moderate cognitive decline, also known as mild or early-stage AD (Stage 4) indicate clear deficiencies in: recollection of recent events, ability to perform challenging arithmetic (e.g., serial sevens) and complex tasks, recollection of personal history, and interaction with others in socially or mentally challenging situations. Moderate or mid-stage AD (Stage 5) is indicative of major gaps in memory and deficits in cognitive functioning. During this stage, the individual requires some help with activities of daily living (ADLs). Moderately severe AD (Stage 6) shows a worsening of memory difficulties, significant changes in personality, and extensive help with ADLs. Here, individuals imperfectly recall their personal history, lose most awareness of recent events, exhibit disruptions in their normal sleeping cycle, increasingly exhibit urinary or fecal incontinence, and begin to wander and become lost. Lastly, severe or late-stage AD (Stage 7) marks the time when individuals are unable to respond to the environment, unable to speak, and unable to control their own movement.

***Depression.*** Categories of depression, including major depressive disorder and dysthymia, are characterized in the Diagnostic and Statistical Manual for Mental Disorders (DSM-IV) (American Psychiatric Association, 2000) and the International Classification of Diseases (ICD-10) (World Health Organization, 2004). Major depressive disorder is defined as having both: (a) a depressed mood or loss of interest or pleasure for at least two weeks, (b) at least 5 of 9 other symptoms, including: physical agitation or psychomotor retardation, significant weight loss or appetite changes, feelings of worthlessness or guilt, and difficulty concentrating or making decisions. Dysthymia, by contrast, is defined as having depressive symptoms less severe than

major depression, but lasting for a minimum of 2 years. Major depression disorder and dysthymia may co-occur, known as *double depression*.

Depression is often characterized by different symptoms in younger and older adults (Fiske and Jones, 2005). As such, it is not appropriate to apply the same diagnostic instruments for depression across all age groups and compare rates across age. For example, emotional and cognitive circumstances, including sadness and negative self-attitude, are better indicators of depression in younger adults; however, somatic symptoms (such as fatigue, insomnia, and changes in appetite), feelings of apathy, hopelessness, and thoughts about death are more appropriate indicators of depression among older adults.

Also, older adults more commonly present symptoms that are not characterized by any one diagnostic criterion. This has been referred to in several terms: subsyndromal depression, minor depression (provisionally characterized in DSM-IV), or mild depression (in ICD-10). These differential criteria for older adults reveal the complexity of evaluating depression in this population. This is further illustrated when determining the low and wide-ranging prevalence of depression among older adults. Dysthymia affects about 2% of adults age 65 and older. Major depressive disorder occurs in 12% of older adults, while minor depression is present in 3 13%. To further complicate diagnoses, depression and dementia may coexist, with nearly a quarter of older adults with dementia also having depression.

Late-life depression can be conceptualized as the interplay among biological, psychological, and social influences. For instance, the developmental diathesis-stress model (Gatz, 1996) states that genetic influences on depression onset are more important early in life, while the effects of some biological risk factors (e.g., neuroanatomical changes) and some medical conditions increase with age. Further, susceptibility to depression may decrease with age as adults learn to better adjust expectations and deal with stressors.

On the other hand, having a previous history of depression increases the likelihood of having late-life depression; half of all older adults with depression were depressed earlier in life. Depression onset occurs in conjunction with, and after, certain medical conditions, such as Parkinson's disease, stroke, and general pain. Depression in middle-aged to older adults has also been associated with occurrence of first heart attack, poorer outcomes after a heart attack, mortality post-stroke, and other cardiovascular conditions. Hence, the reciprocal relationship between depression and poor health places other adults at greater risk of comorbidities, or co-existing conditions.

Negative life events and social influences, including bereavement, caregiving, and illness, are associated with depression in older adults. Within the first year of bereavement, depressive symptoms are common among widowed spouses but triggers for depressive symptoms vary for widows and widowers. Concerns about income trigger symptoms in widows, while loss of emotional support triggers depressive symptoms among widowers. Ultimately, depressive disorder is a complex process that often involves consideration of a combination of biological, psychological, and social influences.

## SOCIAL AGING

Social roles and relationships change with age and time. In fact, social scientists view aging as a series of transitions resulting from changing roles connected to sets of rights and responsibilities. Traditionally, transitioning from one social role to the next coincided closely with one's age. In other words, roles in life were traditionally age-segregated. Children and adolescents were students; adult males worked and provided for the family; adult females cared for children; and old age was spent in retirement and caring for oneself.

Over time, however, the links between age and social roles have blurred. For example, as the length of schooling has increased and the idea of retraining has become accepted, "nontraditional age" students now represent nearly 50% of college enrollment. Women, especially women who are mothers, in the work force have increased markedly since the 1960s as women's roles have expanded. More grandparents are providing care and parenting to grandchildren than in earlier decades. It is also true that until recently the age at retirement had been decreasing so that the modal age was 62. This loosening of age structures in work, family, and education is termed the *deinstitutionalization* or *destandardization* of the life course (Sackmann & Wingens, 2003) and represents changes in social aging processes.

The link between social roles and chronological age is not the same in all societies or at all times. As indicated above, the links have been changing in the United States, and such changes have been occurring in much of the world. It is also true that the expected roles and opportunities for older persons are not always those that they desire. For instance, while the age at retirement has been decreasing, there have been many people who were forced to retire when they would prefer to keep working. It is also not always true that the social structure encourages—and in the case of retirement in the past, even legislates—roles that have resulted in the most appropriate fit for the social and economic circumstances of the society. This lack of fit between expected social roles and societal needs has been termed *structural lag*. One can

view the elimination of mandatory retirement in the United States several decades ago as an attempt to achieve a better fit between the desires of individuals, the needs of the society, and the legislated options for working.

**A Quiet Revolution** Biological and psychological aging focus on individuals but social aging examines societal or population-level as well as individual-level change. Population aging has been ongoing in much of the world for more than a century: The proportion of older individuals has been growing and the absolute number of older adults has been increasing. It results not only from improvements in life expectancy at older age, but from increased survival throughout life and the decrease in fertility that results from declining infant mortality. As a result of these forces, there are significant changes in the age structure of societies. In many countries there has been an interest in the implications of aging because of the increase in the number of older dependents to workers. In countries where aging has been taking place for a long time, there has already been a significant increase in the number of older persons supported by each worker. This ratio is closely tracked by national governments because most countries provide living and medical expenses for older persons. What has sometimes not been noted, but is of relevance to the interest in changing age structures, is that at the same time there has been an increase in the number of older dependents, there has been a decrease in the number of younger persons supported by each worker. The expectation is that aging is going to continue in most countries of the world for the foreseeable future and an older age structure will require further adaptation of the link between social roles and age.

**Family Structure** Aging in families has occurred in parallel with population aging. Demographic changes have resulted in a "quiet revolution" that has lead to the transformation of multiple facets of the family (Lowenstein, 2005). Declines in fertility and increases in life expectancy have changed the structure of families and the interactions between generations. In the beginning of the 20th century most family structures, like most populations, resembled a pyramid. They had a large, bottom-heavy base of children, a smaller number of parental age persons, and a small number of grandparents. In many countries both populations and families are changing from a pyramid structure to resemble a beanpole. In this case, over time there may be relatively equal numbers of people at most ages up to the very old and close to equal numbers of family members within each generation. This change in family structure leads to fewer members in each generation but more generations alive at any one time. This will mean fewer younger members available to care for the growing older population.

## MARRIAGE, PARENTHOOD, AND GRANDPARENTHOOD

With the decrease in the number of children and increases in requirements of skilled jobs, more recent generations have been more likely to delay marriage and parenthood in order to devote more time to education and advancing their careers. In 2005 the median age of marriage for men had risen to 27 years and 26 years for women, with a majority (72%) of both men and women having been married at least once by the time they were 30 and 34 years old. There has also been a decline in the traditional family and greater diversity among families, including truncated families, reconstituted families, single-parent families, and alternate families.

Families have traditionally been the source of caregiving for both older and younger members. With reductions in the number of children and increasing variety of family forms, relationships with siblings, extended kin, and non-kin peers (i.e., alternative families) may play increasingly important roles. Caregiving, often provided by children to parents in later life, may be more difficult to obtain in the future as the availability of children is reduced. As the rates of divorce have increased, the number of reconstituted families has also increased. These families, as well as single-parent families and grandparents raising grandchildren, are at greater risk of intergenerational strain and familial disorder.

Despite these changes, intergenerational relationships may not be negatively affected. Parents and children appear to retain relatively close relationships even in societies that have undergone significant familial change. Relatively strong social norms for the provision of intergenerational support appear to have survived even though the family has undergone dramatic change. It is even possible that such changes could have positive benefits. Due to longer years lived, there is more time to share with other generations and this could result in stronger relationships across generations. Despite geographic distance, adult children and parents are able to maintain frequent contact and interaction with improved means of communication. Extended families appear to maintain their intergenerational cohesion.

Research has found that across generations, there are shared values, normative obligations to provide care, and lasting ties between parents and children. Generally, research suggests that parents and children provide needed support to each other and that such support improves emotional states throughout life and contributes to better adjustments to crises, such as widowhood, encountered during later life.

While there have been major changes in expected social roles and their link to age, most people still marry, have children, and become grandparents. Based on current

cohorts of older adults, three-quarters of adults will become grandparents, with a fifth of all women who die after 80 having spent some time in a five-generation family as great-great-grandmothers. Nearly one-third of grandparents will experience great-grandparenthood and will be part of a four-generation family. Not only are families more likely to consist of more generations, but they are also more likely to be grandparents for longer, with some people as grandparents for more than half of their lifetimes. As more people become grandparents for longer periods of their lives, grandparents could occupy an expanding, and increasingly important, role within the family as the opportunity for more and longer interaction across generations increases. Custodial grandparents, or grandparents raising grandkids, have recently garnered increasing attention. The number of grandparent-headed households increased since the late 1990s by more than 50% with 1.3 million children raised solely by a grandparent as of 2005. The increase in grandparents raising grandkids can be attributed to increasing difficulties experienced by the ''middle'' or parent generation, including substance abuse, mental illness, imprisonment, and HIV/AIDS.

## LIFE COURSE PERSPECTIVE

The life course perspective is a theoretical orientation that guides research and contributes to our current understanding of humans' lives (e.g., changing roles and relationships with age and time) within historical and biographical contexts (Elder, 2003). The life course perspective is a framework for studying issues central to social change and developmental trajectories. Development is understood to be a lifelong process of fundamental biological, psychological, and social changes. It is also true that people create their own life course via decisions and actions taken in response to personal, social, and historical circumstances. These choices may affect future trajectories. For instance, a woman's choice to delay marriage and parenthood may then delay her age of grandparenthood. Individuals are shaped by the historical atmosphere and places experienced throughout life. For instance, people who experience devastating events like a war early in life may have their lives forever changed by their experience.

Depending on the time of occurrence during the life course, the same experiences or events affect individuals in varying ways. For instance, early parenthood can have detrimental effects on educational and occupational attainment. It is also true that lives are interdependent and relationships are impacted by social and historical influences. Due to this interdependence, transitions in one individual's life often result in transitions for others as well. For instance, a daughter's early role transition to motherhood results in her mother's early transition to grandparenthood, altering both of their roles and social identities. Interestingly, women who enter parenthood in early life often also enter grandparenthood at an earlier age.

Ultimately, the life course perspective considers individual choice and the process of decision-making. It acknowledges social and historical context, timing of events, role changes, and the interdependency of life. Future generations of researchers will continue to use the life course perspective to expand knowledge of how aging is affected by social influences and how aging, itself, affects social structures and societal roles.

Aging reflects a complex interplay among biological, psychological, and social influences combined. Hence, an interdisciplinary perspective of all three aspects of aging is essential to understanding life from childhood to late adulthood. All make clear that aging is a process that begins early in life and is affected by all one's exposure and experiences, and because the social world changes, aging is not a static experience.

**SEE ALSO** Volume 2: *Personality; Roles;* Volume 3: *Active Life Expectancy; Cognitive Functioning and Decline; Dementias; Frailty and Robustness; Genetic Influences, Later Life; Life Expectancy; Mental Health, Later Life; Population Aging; Self; Social Support, Later Life.*

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## AGING IN PLACE

As people reach the final stages of their life course, most want to remain as active and independent as possible for as long as possible. They want to age at home surrounded by friends and family, not in institutions such as nursing homes (Marek and Rantz, 2000). According to an American Association of Retired Persons' (AARP) 2005 *State of 50+ American Survey*, 89% of people over age 50 want to remain in their home for as long as possible, and 85% want to stay in their community for as long as possible. Among the reasons for remaining in the community is continuing to be close to friends and family (AARP, 2006). As people age they may be forced to move when characteristics of their home environment, such as stairs, width of doors and hallways, and bathroom and kitchen design, may no longer accommodate changes in health and functional status or when supportive services to accommodate their needs are unavailable. The goal of aging in place is to allow seniors to remain in the

environment of their choice with supportive services as needed (Marek and Rantz, 2000).

Traditionally, older adults have been forced to move as health status deteriorates, needs change, and living environments no longer support successful aging. For older adults who choose to reside in long-term care residential facilities rather than in private homes in the community, state and federal regulations define building safety features, care that can be provided, staffing standards, as well as potential public payment for living in senior housing, residential (assisted living) facilities, or nursing homes. These regulations differ from state to state, but often require an older adult to maintain a certain level of ability to remain in senior housing or residential care. Although relocation has been associated with stress-related illness in older adults, regulations and discharge criteria force older adults to move from senior housing to residential care/assisted living, and finally to a nursing home as health deteriorates (Rantz, Marek, Aud, Johnson, Otto, et al., 2005a). For example, Mr. Jones may be satisfied living in senior housing, having some meals provided. He then experiences pneumonia and a minor stroke. After hospitalization and some rehabilitation in a Medicare skilled nursing facility, he returns to his apartment but has problems with frequent falls and is unable to get up on his own. The housing manager considers him a safety risk and insists he move to the residential care facility nearby so that staff can look after him and help him when he falls. After a few months in residential care, Mr. Jones has another stroke, is hospitalized, and enters a nursing home for rehabilitation in the Medicare unit. Following three weeks of rehabilitation, the physical therapist determines that he will need continuing nursing home care because he cannot walk sufficient distances as required in fire safety drills in his former residential care facility.

*Aging in place* is defined as older adults remaining at home with the services they need for continued residence as they grow older. The key to facilitating aging in place is to separate the type of care provided from the place of the care. In this model, people will not have to move from one level of care delivery to another as their needs change; instead, all the services they need will be delivered in their home. The concept of home includes all residential settings where medical services are not delivered. Home could mean residential care/assisted living, senior housing, an apartment, or private homes (Marek and Rantz, 2000).

The term *aging in place* first emerged in the research literature in the 1980s as researchers were focusing on quality of care and housing needs of older adults. Quality of care was a major issue during the 1980s because of numerous problems in nursing homes that led to U.S. government legislation in 1987 establishing resident rights and standards of care. As one could anticipate with publicity about nursing home problems, people wanted to remain at home as long as possible.

The idea of helping people age at home is not new. Many older individuals age naturally in the environment of their choice with the help of family and friends. Others receive services from a variety of community organizations and businesses. Indeed, many services exist to help older adults age in place. Services are available to help with meals; transportation; housekeeping; shopping for groceries, clothing, or health care items; and help with daily activities like bathing, dressing, or eating. Technologies are also making it easier for people to access health care and communicate with health care professionals. Technologies like such as, the Internet, videophones, and telehealth are helping to make many services more accessible (Demiris, Rantz, Aud, Marek, Tyler, et al., 2004).

Unfortunately, many of these services may not available in rural areas. Rural populations lag behind more populated areas in the variety and amount of services offered, particularly transportation, making aging in place harder. However, many rural people still manage to age in place with the support of family and friends. This option is not always available to older adults; as their children reach young adulthood, many move away from the rural areas to metropolitan areas for employment.

The home itself can affect an individual's ability to age in place. Most homes are not designed with the aging population in mind. The majority of residential housing is tailored to healthy young adults and does not take into account age-related changes such as limited mobility or reduced sensory function (Senior Resources, 2008). Age-related changes may affect one's ability to remain at home, but simple changes can dramatically enhance the home environment. For example, adding grab bars in the bathroom; replacing bathtubs with step-in showers; or moving laundry equipment to the same floor as primary living space will facilitate aging in place.

The term aging in place has been taken over by the senior housing industry to promote a variety of housing options with a range of health care services. The term has been used to market several types of facilities, including assisted living facilities and continuing care retirement communities. However, these settings offer a model of aging in place that differs from the model described here.

Assisted living facilities offer an alternative to nursing home care. Assisted living facilities provide 24-hour care in a residential setting to individuals who need help with some activities of daily living such as bathing, eating, dressing, going to the bathroom, or taking

***Nursing Home.*** *Ebony Martin, 17, and Lilly Maud Walton, 113, in the common area of Ansley Pavilion Nursing Home playing Balloon Volleyball. Many services exist to help older adults age in place.* © MARTIN H. SIMON/CORBIS.

medication, but who do not need the intensive skilled nursing and medical care provided in nursing homes. Assisted living facilities offer the promise of aging in place. However, people move out of assisted living to a higher level of care if health care needs exceed the capacity of the facility to provide care (Chapin and Dobbs-Kepper, 2001; Frank, 2001; Aud, 2004; Ball, Perkins, Whittington, Connell, et al., 2004).

The continuing care retirement community model encompasses different levels of care in one building or on a campus. For example, a community may include independent housing, assisted living, and a nursing home in different buildings within a campus. The continuing care retirement community does allow people to age in place; however the model still requires people to move from place to place within the building or on the campus as their health deteriorates.

In Missouri a demonstration project has been undertaken to evaluate whether aging in place really works. Legislation in 1999 and 2001 enabled the creation of this project within the highly regulated long-term care environment. The purpose of this program was to create innovative approaches to senior housing that incorporate health care services that adjust to the residents' changing needs. One of the four sites chosen for the demonstration, TigerPlace, is a prime example of this new kind of facility.

TigerPlace, a unique senior retirement community, was developed by faculty from the University of Missouri Sinclair School of Nursing and is based on the concept of aging in place. Rather than forcing residents to move as their needs change, TigerPlace offers varied services as needed. TigerPlace not only promotes the independence of its residents (Rantz, 2003) but also helps residents remain healthier and active longer by providing nursing care coordination, direct personal care as needed, ongoing nursing assessment (complete assessment every six months), early illness recognition, health promotion activities, and social activities—all within well-designed housing. TigerPlace is built to nursing home standards, licensed as the state's only aging in place building, and is designed to help residents avoid expensive and debilitating hospitalizations, and for most residents, avoid relocation to a long-term care facility.

The preliminary findings from the demonstration project indicate that this approach positively affects the residents and their families. Satisfaction, overall well-being, social engagement, and maintaining physical function are high while discharges to traditional nursing home care are very infrequent. Several residents died after moving to TigerPlace; most of these deaths were expected, and each resident died with his or her wishes respected, receiving personal care and hospice services as needed, with family and staff close by. These are the truly successful outcomes of aging in place: enjoying life until the end in one's own home with family and friends, getting the required care and services when they are needed.

An important feature of TigerPlace is the interdisciplinary research that takes place there. It is focused on using technology to enhance people's ability age in place and prevent or delay the decline associated with aging (Rantz, Marek, Aud, Tyrer, Skubic, et al., 2005b). Researchers are using sensors to collect physiological data including heart rate, blood pressure, bed restlessness, as well as activity levels (motion sensors). These data are being used to detect changes in health status so health care professionals may intervene to prevent or delay declines in health status (Rantz, Skubic, Burks, Yu, Demiris, et al., 2008).

Others are working on technology that automatically controls room temperature, windows, doors, locks, and other environmental factors (Haigh, Kiff, and Ho, 2006; Plocher, Kiff, and Krichbaum, 2004). Additionally, technology can also provide a safer environment. For example, lights can be automatically switched on when someone enters a room or the stove can automatically turn off if left on too long. All of these technological advances are making it easier for people more safely to age in place.

Aging in place is an idea that is here to stay. People want the independence, privacy, and social support that come with remaining at home. Politicians, researchers, health care providers, and businesses are listening to the wishes of the aging population and are changing to meet their demands.

**SEE ALSO** Volume 3: *Assisted Living Facilities; Assistive Technologies; Neighborhood Context, Later Life; Residential Mobility, Later Life; Retirement Communities.*

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## ALLOSTATIC LOAD

In recent years, many scholars have used allostatic load to explain how various hardships associated with poor social environments "get under the skin" to affect disease and mortality risks, particularly in later life (Seeman, Singer, Ryff, Love, & Levy-Storms, 2002, p. 395). Allostatic load is based on the concept of *allostasis*, or "the ability

of the body to increase or decrease vital functions to a new steady state on challenge" (McEwen & Stellar, 1993, p. 2093). Broadly speaking, these vital functions include cardiovascular health, body composition, stress hormones, and the immune system (Seeman, Singer, Rowe, Horwitz, & McEwen, 1997; Seplaki, Goldman, Weinstein, & Lin, 2006). The definition of allostasis is reflected in its etymology, which involves the ancient Greek terms *allo* and *stasis*, meaning change and stability, respectively (Szanton, Gill, & Allen, 2005). Indeed, one conception of allostasis is simply physiological "stability through change" (Sterling, 2004, p. 18). Some scholars view allostasis as a complement to the traditional medical concept of homeostasis, which describes the body's ability to maintain internal conditions such as heart rate and body temperature within a normal, well-tolerated set of parameters (McEwen & Wingfield, 2003). Other scholars have argued that because allostasis more accurately describes physiologic processes, it should overthrow homeostasis as the primary model for internal biological maintenance (Sterling, 2004).

Allostasis is vital for short-term adaptation to physical stressors such as caloric imbalance and psychological stressors such as marital distress, but it is not without long-term physiological cost. *Allostatic load* is a concept that attempts to understand the cumulative effect, or "wear and tear" of repeated physiological adjustments to stress (McEwen & Seeman, 1999). It is important to distinguish allostatic load from an *allostatic state*, which "can be defined as a state of chronic deviation of the regulatory systems from their normal state of operation" (Koob & Le Moal, 2001, p. 102). Over time, an allostatic state can result in allostatic load by overwhelming an organism's ability to cope with repeated adaptations to challenging conditions. For example, excessive production of stress hormones such as cortisol (i.e., one form of an allostatic state) over long periods of time may eventually result in elevated blood pressure (Fraser et al, 1999), which has traditionally been viewed as one key marker of allostatic load (Seeman et al., 1997).

## MEASUREMENT

Allostatic load (AL) was initially measured as an index of 10 biomarkers that were believed to measure the level of physiologic dysregulation, which is simply the overall level of bodily duress (Seeman et al., 1997). These biomarkers are defined as follows (MedicineNet.com, 2008; Seeman et al., 1997):

1. Systolic blood pressure: top number in a blood pressure reading that measures the maximum arterial pressure as the heart contracts; included in AL as an indicator of cardiovascular health.
2. Diastolic blood pressure: bottom number in a blood pressure reading that measures the minimum arterial pressure as the heart relaxes; included in AL as an indicator of cardiovascular health.
3. Ratio of (waist circumference / hip circumference): measures adiposity; included in AL to assess calorie imbalance and metabolism.
4. High-density lipoprotein (HDL) cholesterol: good form of cholesterol that protects arteries from plaque accumulation; included in AL to assess risk of developing atherosclerosis (higher values reflect lower risk).
5. Ratio of (total cholesterol / HDL cholesterol): proxy indicator for plaque inducing low-density lipoprotein (LDL) cholesterol; included in AL to assess risk of developing atherosclerosis (higher values reflect higher risk).
6. Glycosylated hemoglobin: blood sugar that has become attached to the hemoglobin molecule in red blood cells; included in AL to measure glucose metabolism and diabetes mellitus (higher values reflect higher risk).
7. Cortisol: a corticosteroid hormone released by the adrenal gland in response to stress; included in AL to measure stress hormones that may weaken the immune system and cause other health issues (e.g., weight gain) at elevated levels.
8. Epinephrine: often referred to as adrenaline, this adrenal hormone causes arterial dilation and increases heart rate; included in AL to assess stress hormone levels.
9. Norepinephrine: an adrenal hormone that causes vasoconstriction and increases blood pressure; included in AL to assess stress hormone levels.
10. Dehydroepiandrosterone sulfate (DHEA-S): an adrenal hormone that is similar to testosterone in its physical effects; included in AL to assess stress hormone levels.

When operationalized in the traditional way, each biomarker is dichotomized into a high-risk quartile (the worst 25% of research participants) with a score of one and a "normal range" category (the remaining 75% of research participants) with a score of 0 and then summed—yielding an index ranging from 0 to 10, with 10 being the maximal score for allostatic load. Since this initial attempt to measure the concept of allostatic load, researchers have developed more complicated and nuanced techniques. This research suggests that some biomarkers may be more important measures of allostatic load than others. For instance, one study (Karlamangla Singer, McEwen, Rowe, & Seeman, 2002) found that

epinephrine and diastolic blood pressure were particularly important measures of allostatic load, whereas other measures such as HDL cholesterol were unnecessary. Similarly, Burton Singer, Carol Ryff, and Teresa Seeman (2004) found that diastolic blood pressure was a particularly important measure of allostatic load. However, unlike Karlamangla et al.'s analysis, Singer and colleagues found that HDL cholesterol was an important contributor to the allostatic load construct.

Despite these improvements, Christopher Seplaki and colleagues (2006) have identified a number of limitations of previous efforts to measure allostatic load. For instance, existing measures tend to capture health risks associated with elevated biomarkers (e.g., high blood pressure) but not risks associated with unusually low levels of those same biomarkers (e.g., hypotension). Another limitation is that allostatic load may not operate in the same matter for men and women, suggesting that gender insensitive measures of allostatic load may be inappropriate. Also, most research on allostatic load is based on a single study (the MacArthur Study of Successful Aging), raising serious questions about the generalizability of existing knowledge. Importantly, most research to date has failed to account for immune function, which is a potentially important component of the allostatic load construct.

To account for these shortcomings, Seplaki and colleagues (2006) devised a measure of allostatic load that incorporated a total of 16 biomarkers. In addition to the 10 biomarkers used previously, these scholars included dopamine, body mass index, triglycerides, fasting glucose, insulin-like growth factor-1, and interleukin-6. The latter two biomarkers provided an assessment of immune function, whereas the others offered a more comprehensive picture of stress response, body composition, metabolic function, and cardiovascular health. Using a sample of 972 Taiwanese adults age 70 or older from the 2000 Social Environment and Biomarkers of Aging Study, Seplaki et al. used an advanced statistical technique to create five distinct allostatic load profiles for various sorts of health risk (e.g., low stress hormones but elevated biomarkers for metabolic and cardiovascular function). Analyses showed that this new measure of allostatic load performed better than the traditional 10-count measure in terms of the strength of its associations with health outcomes. In addition to this important finding, the study found only relatively minor gender differences in allostatic load in this sample of older Taiwanese adults, suggesting that previous concerns about gender differences may have been overstated.

## CAUSES OF ALLOSTATIC LOAD

Extant literature suggests that allostatic load is caused by repeated exposures to various stressors across the life course. These stressors have been defined as "external and internal challenges to the body and brain" (Koob & Le Moal, 2001, p. 99) and also as "events that are threatening to an individual and elicit physiological and behavioral responses" (McEwen, 2004, p. 67). These stressors may include (a) physical challenges such as hunger, exhaustion, temperature variations, and infections and (b) emotional and psychological difficulties such as anxiety and depression. (McEwen & Stellar, 1993; Schulkin, 2004). As various body systems—including the autonomic nervous system, the hypothalamo-pituitary-adrenal axis, and the immune system—respond to these challenges, allostasis results; as noted, this is functional for short-term adaptation (McEwen, 2002).

However, overexposure to stressors can provoke allostatic load, which is influenced by "repeated cycles of allostasis as well as the inefficient turning-on or shutting-off of these responses" (p. 32). For instance, depressed individuals are often beset with anxiety about future circumstances, provoking the release and chronic elevation of stress hormones such as cortisol (Schulkin, 2004). This has deleterious consequences, including high metabolic rates in the amygdala (a portion of the brain involved in processing emotions such as fear and anger), which may cause a "biasing of the brain" that further predisposes depressed persons toward negative and fearful affect (p. 9).

Although intuitively appealing, studies on the influence of stressors on allostatic load have produced mixed results. Analyses of data from the Wisconsin Longitudinal Study and the MacArthur Studies of Successful Aging demonstrated that individuals with positive social relationships were significantly less likely than individuals without such bonds to have elevated allostatic load scores (Seeman et al., 2002). To illustrate, women in the Wisconsin Longitudinal Study cohort with positive relationship histories were 78% less likely than women with negative histories to score high on the allostatic load index. Despite these compelling findings, some research has yielded less consistent results. For instance, analyses of 13 different scales of work conditions in a manufacturing plant in southern Germany found that only one of these scales—job demands—was significantly (but only weakly) associated with allostatic load (Schnorpfeil et al., 2003). Contrary to Seeman et al., Schnorpfeil et al. did not find significant associations between allostatic load and social support.

Another study (Glei, Goldman, Chuang, & Weinstein, 2007) found only weak support for the association between chronic stressors and allostatic load in the same sample of older Taiwanese adults examined by Seplaki et al. Similarly, an analysis of 290 Dutch managers failed to find any significant differences in allostatic load between "burned out" and exhausted managers and those with better mental health (Langelaan, Bakker, Schaufeli, van

Rhenen, & van Doornen, 2007). Clearly, further research is needed to sort through these findings and elucidate the causes of allostatic load.

## CONSEQUENCES OF ALLOSTATIC LOAD FOR HEALTH AND WELL-BEING

Research has shown that allostatic load is associated with a number of different health outcomes. In a seminal study documenting the health effects of allostatic load, Seeman et al. (1997) found that higher levels of allostatic load predicted decline in both the cognitive and functional capabilities of research participants in the MacArthur Studies of Successful Aging. These results were supported and extended by Karlamangla et al. (2002), who used canonical correlation analyses to show substantially stronger associations between allostatic load and health outcomes than initially found by Seeman et al. Additional research using the MacArthur Studies of Successful Aging cohort has shown that allostatic load is a strong predictor of mortality risk, independent of baseline health conditions and several other covariates such as sex, age, income, and education (Seeman, McEwen, Rowe, & Singer, 2001). Other research has used sophisticated statistical modeling to demonstrate that allostatic load is significantly associated with self-rated health, physical functioning, and depression in a cohort of older Taiwanese individuals (Seplaki et al., 2006).

In addition to health differences among individuals, Szanton et al. (2005) have suggested that allostatic load may explain health disparities across socioeconomic status groups. As resources such as income and education decline, the risk for exposure to chronic stressors increases (House et al., 1994; Marmot et al., 1991). Consequently, it is not surprising that studies have found higher levels of allostatic load in lower socioeconomic status groups (Seeman et al., 2004; Weinstein, Goldman, Hedley, Lin, & Seeman, 2003). Such findings are potentially important, as the elimination of health disparities is currently a top public health priority in the United States (U.S. Department of Health and Human Services, 2000).

## LIMITATIONS

Allostatic load has provided an innovative and useful way to conceptualize the physiological mechanisms that may mediate physical and psychological stressors and deleterious health outcomes. Prior research has shown that allostatic load predicts a range of health outcomes and, to a lesser extent, is associated with an assortment of stressors. Nevertheless, as Jay Schulkin (2004) pointed out, "There are no knock-down arguments for the concept of allostasis" (p. 12) and important questions remain about the validity of allostatic load.

For instance, studies have shown that some biomarkers used to measure allostatic load are more consequential for health than others and even that some biomarkers have no effect (Karlamangla et al., 2002; Singer et al., 2004). This raises the possibility that allostatic load is simply a new term used to describe previously established threats to health such as high blood pressure and elevated levels of cortisol. Furthermore, although research has shown that stress hormones and biomarkers associated with syndrome X (i.e., high cardiovascular risk) independently predict certain health outcomes, it has yet to show that the subcomponents of allostatic load combine to form a single underlying construct. In fact, preliminary analyses of MacArthur data failed to detect significant associations between latent constructs for stress hormones and syndrome X (Reither & Seeman, 2004). Should further research confirm this finding, would it be fair to say that allostatic load is an overarching construct that describes multiple, co-occurring physiological processes?

Despite these questions, ongoing research is continually refining allostatic load and addressing its limitations. For instance, several studies have adopted sophisticated methodologies to help improve the measurement of allostatic load (Karlamangla et al., 2002; Seplaki et al., 2006; Singer et al., 2004). Also, Seplaki et al. have expanded the number of biomarkers used to measure allostatic load, including two measures of immune function. With additional refinement, allostatic load promises to fulfill its potential as a valid and reliable measure of cumulative, physiological dysregulation. With better measurement comes the promise of superior detection of the preclinical signs of a wide range of diseases that afflict older individuals, which is particularly important given the rapid aging of the world's population.

**SEE ALSO** Volume 3: *Aging; Chronic Illness, Adulthood and Later Life; Diabetes, Adulthood and Later Life; Health Differentials/Disparities, Later Life; Stress in Later Life.*

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## ALZHEIMER'S DISEASE

SEE Volume 3: *Cognitive Functioning and Decline; Dementias.*

## ARTHRITIS

Within the past century, scientific and medical advancements have been successful in preserving health and preventing and treating acute, infectious diseases (e.g., polio, tuberculosis) that negatively affect population health. These accomplishments, coupled with the growth of the U.S. population and increased life expectancy, have shifted the attention of medical and public health professionals to the prevalence and incidence of more chronic medical conditions such as hypertension, diabetes, cancer, and arthritis.

Arthritis, a condition characterized by pain, aching, stiffness, and swelling in and around the joint, poses a significant burden on the total U.S. population. It is one of the most common nonfatal chronic diseases (depending on the diagnosis) in the United States and is the leading cause of pain, substantive physical disability, and reduced quality of life, particularly among adults 65 years of age and older. An estimated 21.6% (46.4 million) of the adult U.S. population has been diagnosed

by their doctor with an arthritis condition. Specifically, 29.3% (20.5 million) of those ages 45 to 64 years of age report being doctor-diagnosed with an arthritis condition, with another 50% (17.2 million) among those age 65 and older reporting such a condition. With the increase in life expectancy, the number of diagnosed cases is expected to increase to 67 million adults by 2030.

Derived from the Greek words *arthron* ("joints") and *itis* ("inflammation"), arthritis is a general term used to describe more than 100 different conditions that affect the joint(s) and/or connective tissues. The most common types of arthritis are osteoarthritis (OA), which causes deterioration of the cartilage, and rheumatoid arthritis (RA), an autoimmune disease that causes inflammation of the joint lining and severe and irreversible damage to the heart muscle, lungs, kidneys, liver, and other organs and systems of the body. Other common forms of arthritis include fibromyalgia, gout, and systemic lupus erythematosus, which also have a significant impact on performance of routine tasks, leisure activities, and daily physical activities.

***Rehumatoid Arthritis.*** *Characterized by pain, aching, stiffness, swelling in and around the joint, arthritis poses a significant burden on the US population.* CUSTOM MEDICAL STOCK PHOTO.

## PHYSICAL AND PSYCHOLOGICAL IMPACT OF ARTHRITIS

Defined as the difficulty, inability, or limitation in performing basic functional activities, an estimated 49 million noninstitutionalized persons report some degree of physical impairment or disability due to chronic illness. Whereas the changes in functional status contribute to lost work productivity, they also increase nursing home admissions, health care use, and expenditures. Approximately 16.9.4 million (7.9%) of the adult U.S. population report arthritis-attributable activity limitation (e.g., walking, bathing, dressing). This is projected to increase to 25 million (9.3%) by 2030. This is of growing concern as 54% of all arthritis-attributable activity limitation cases will be among adults 65 years of age and older by 2030. The physical limitations associated with arthritis involve a process in which muscle weakness leads to unstable joints; the resulting stress that is exerted on unstable joints cause physical disability and pain.

Paradoxically, attempts to avoid the pain associated with normal activities may lead to increased muscle weakness or muscle atrophy, in which the individual may lose muscle tone or experience a wasting or loss of muscle tissue. This may initiate a cycle of activity avoidance, physical disability, and pain.

Pain is the predominant manifestation of arthritis and is a significant predictor of disability, particularly for activities involving transfer, mobility, and other instrumental activities of daily living. Defined as an unpleasant sensory and emotional experience that impacts an individual's physical and psychological health and social well-being, the pain experience is not only a major health concern for individuals with arthritis but is also a significant predictor of current and future medication use, future pain experiences, and subsequent physical disability.

The pain experience varies from patient to patient and is contingent on a myriad of factors, including the history of the illness, duration of the medical condition, type (acute versus chronic) and location of the pain, variability of daily pain, number of painful days, number of joints affected, physiological changes (e.g., changes to the body's tissue structure), and side effects of pharmacologic interventions.

Aside from the physical expression of arthritis, many psychosocial factors are associated with the onset and experience of the disease. Psychosocial factors are defined as psychological, behavioral, and social processes that include beliefs, values, perceptions, culture, coping behaviors, personality indicators, and social resources and networks (e.g.,

social support), all of which influence how the individual detects, interprets, and responds to arthritis.

## CULTURAL DIFFERENCES

Although the biological sensations of pain are universal, the meaning, attitudes, and response to the pain experience differ across race, gender, and age subgroups. For example, some racial and ethnic groups are known to have specific "pain rituals" that shape the expectations and beliefs about pain, as well as strategies to tolerate the pain experience. Factors such as differences in language, ways of understanding and expressing health and disease, preferred modalities of health care management and treatment, the expression and meaning of pain, and the use of identified strategies to cope with pain are among the many factors that define the experience and cultural context of pain. For example, unlike the Western dichotomy of mind and body in explaining the pain experience, pain from a Chinese perspective, is regarded as a complex experience that can be understood only through the understanding of identified Eastern philosophies (e.g., Taoism/Energy Theory, Buddhism, and Confucianism). Social learning is another factor that may explain the contextual patterning and influence lifetime exposure has on how, why, and when this (pain) and other arthritis-related symptoms are experienced.

Race, which comprises ethnicity and culture, is a complex and multidimensional construct that establishes a conceptual framework for how people perceive health, illness, social demands, and environmental changes across the lifespan. To understand the role of race in daily behavior is to understand the extent to which the individual identifies with that particular race (or cultural) group and how experiences throughout the life course influence those experiences.

Social and demographic factors such as age and gender are associated with variability in the arthritis experience. For example, women 65 years of age and older are more likely to experience OA compared to women 35 years of age and younger. Specifically, there is growing evidence of the steady increase in the average age of persons with certain arthritis conditions such as RA, suggesting that RA and related morbidity, mortality, and disability rates are becoming more of an arthritis condition among older adults. Gender also dictates the disease process and its influence on physical health outcomes. Women are more likely to report pain-related chronic conditions such as OA, RA, fibromyalgia, and systemic lupus erythe than their male counterparts. Specifically, arthritis is reported as the most frequent cause of disability among women in general and among those diagnosed with arthritis in particular. National studies corroborate these findings, showing that OA prevalence tends to increase with age and affect woman more frequently than men. Despite the prevalence of these conditions, women are often treated less aggressively for their arthritis-related symptoms. Black women, for example, are at an increased risk for being diagnosed with an arthritis condition that is more severe, physically debilitating, and undertreated when compared to Black men and White men and women. This clearly shows that gender coupled with race has a substantial influence on the arthritis experience.

One's socioeconomic status (SES—e.g., income, education, occupational status), past and current, also influences the experience of arthritis. It is often difficult to determine the effects of SES and race exclusively in reports of arthritis and arthritis-related symptoms. Concatenated data from several national studies show pervasive race differences, with persons from minority populations reporting more severe and debilitating cases of arthritis. Others, however, have found no differences between majority and minority raced populations. Despite these findings, there has been more consistency in documenting the influence of SES on disease onset. Contemporary literature contends that persons with low SES are more likely to report arthritis and experience a decline in functional capacities than those with high SES.

It is important to consider the influence of SES (i.e., social positioning) when examining the etiology, prevalence, and incidence of arthritis, as it may capture lifetime exposure to deprived conditions (social, environmental), which may impact identified health outcomes in general, particularly among persons from more marginalized populations (e.g., minorities, elderly, women, the disabled). This is critical in the attempt to better understand the influence of SES and race on the etiology, progression, and outcome of arthritis among the elderly. For example, it has been shown that, despite equivalent levels of education (i.e., high SES), Whites reported better overall health, whereas Blacks did not enjoy the same health benefits due to higher attained levels of education. Despite these findings, there remains some debate as to whether race and SES function exclusively of one another or as binary constructs. This attests to the difficulty in disentangling the effects of race and SES, as both are cited as being significantly related to one another.

Health reflects a biological, behavioral, and social patterning of differential treatment, rights, and privileges that are defined by the life course, which is embedded in larger historical, geographic, social, cultural, and economic milieus. These constructs become more salient in light the steady increase in the number of older adults. With the increased life expectancy in U.S. society, the focus should extend more to the basic psychological and physical needs of older adults, as many will experience multiple chronic conditions, such as arthritis, within their lifetime. More important, decreasing the impact

of arthritis among the aging population will require proven health policies and applied public health interventions that improve functional abilities, decrease pain, and delay the experience of arthritis-related disabilities. Addressing these issues may ultimately help to identify the social, psychological, physical, and cultural factors that have important implications for policy, advocacy, and long-term needs of our growing population.

**SEE ALSO** Volume 3: *Chronic Illness, Adulthood and Later Life; Disability and Functional Limitations, Later Life; Pain, Acute and Chronic.*

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***Tamara A. Baker***

# ASSISTED LIVING FACILITIES

With the dramatic increase in the size of the aged population in the United States, Europe, and Asia, people are seeking new ways to approach how to care for and support the elderly. Traditionally, people remained at home (aging in place), and they transitioned into total care institutions (nursing homes) only when infirmity or health conditions became unmanageable. Until quite recently, individuals and families had few, if any, alternatives to these two extremes in their choice for living arrangements. The formal emergence of intermediate forms of housing, often known as assisted living facilities, has made rapid inroads in filling this need. This approach affords older adults the opportunity to maintain autonomy and independence when they find it difficult to manage some aspects of their day-to-day activities but are not in need of skilled nursing care and the restrictions that are associated with a nursing home facility. Often assisted living facilities work with traditional nursing homes systems so the elderly person can transition from limited levels of care, such as with meals and housekeeping, up to and including 24-hour intensive care. If properly managed and administered, this structured series of transitions offer individuals the opportunity to maintain autonomy for as long as reasonable and can offer a greater sense of dignity and control over their lives.

## HISTORICAL PATTERNS OF CARE

Assisted living is a new development in the ongoing evolution of long-term care for the aged. Historically, most individuals did not retire in a formal sense; instead they worked until they died or until they became too impaired to contribute to the household. Prior to the 20th century,

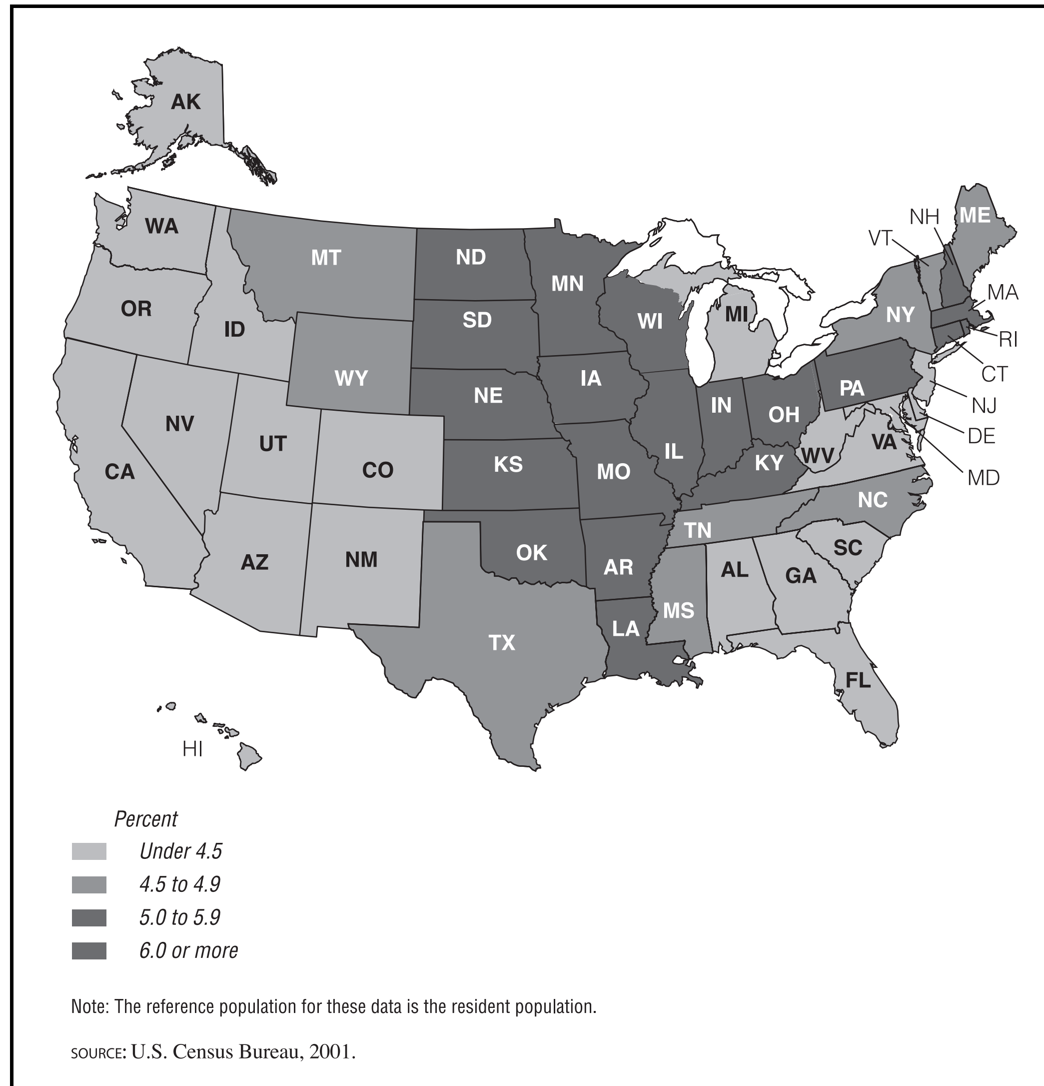


***Figure 1.*** *Percent of the state population aged 65 and over residing in a nursing home, 2000.* CENGAGE LEARNING, GALE.

those people who stopped working in old age normally did so because of physical disability or poor health, although quite often they continued to contribute to the household by performing tasks such as childcare, cooking, and cleaning. With no formal systems of portable economic support (such as pension benefits), the end of work also meant the end of one's income and the capacity to support oneself. Pension systems were rare at that time, and elders who could no longer work and lacked independent resources depended on family, friends, and churches to help them survive. The provision of care was encouraged by social convention and altruism so that most older adults were cared for to some degree—largely by family members. Those who could not depend on family or the community had few alternatives. In the 19th and early 20th centuries, elderly persons who lacked a source of care or support, along with other indigent persons, were frequently required to relocate to state- or locally run homes for the poor. Known under various names, including poorhouses, almshouses, poor farms, infirmaries, and asylums, these residences were often poorly run, overcrowded, and provided only minimal food, shelter, and clothing.

Both home care and state confinement were inadequate sources of care. Home care without an adequate income stream would limit the amount and quality of care a family could provide, and a disabled or infirm elder in the household often represented a strain on family economies. At the other extreme, state confinement in poorhouses was a legislated response to concerns over the destitute population lacking any age-appropriated services or care

consideration. Consequently, the elders in these situations had to accept whatever limited services the poorhouse offered and were unable to receive care that focused on their specific needs. When entering these institutions they became part of a general population undifferentiated by age, health concerns, or mental capacity. This represented a place of last resort for the elderly poor—a situation driven by the lack of systematic programs to provide portable income to the elderly when they ceased working.

Although a number of states in the early 20th century recognized older adults as a vulnerable population and offered old-age assistance, the plans varied widely across states and were difficult to maintain because of their noncontributory structure. As the state allocated and controlled all money being distributed, it was seen as simple charity as opposed to a pension system in which the elderly recovered something they had invested in over a period of years.

The introduction of universal social security in 1935 as part of the New Deal was the mechanism by which this system of poverty and dependence among the aged was addressed at the federal level in the United States. Initially it provided an Old-Age Assistance program that matched 50% of the contribution made at the state level. This was a short-term bridge that allowed the more familiar Old-Age Insurance program to accumulate enough funds for disbursements that would not begin until after 1942. Because Old-Age Assistance funds could not be obtained by older adults living in public institutions, this discouraged and eventually eliminated the presence of poorhouses for the elderly and offered incentives that led to the creation of privately run retirement homes that were the precursors to both the nursing home and the assisted living residential models for the elderly. When Social Security allowed residents of public institutions to receive benefits and required state licensing of nursing homes in the 1950s, the nursing homes industry grew tremendously. It was the addition of Medicare and Medicaid as part of the Social Security Act amendments signed into law by President Lyndon Johnson (1908–1973) on July 30, 1965, that allowed nursing homes to provide a wide array of short- and long-term services to the elderly and marked the true beginning of the total care institutionalized nursing care industry.

## NEW MODELS OF CARE AND THE EMERGENCE OF ASSISTED LIVING RESIDENCES

Although the growth of the licensed nursing home industry immeasurably improved the lives of frail and disabled elders who could no longer live in their homes, it was far from the perfect solution for addressing the needs of a growing elderly population. Licensing helped promote the adequate care and protection of the elderly, but he payment of care remained a contentious issue through the 1970s with Congress debating over the amount of care that Medicare and Medicaid would cover. The 1970s was also a period during which the first severe abuses of the new system of nursing homes came to light. Research by Claire Townsend in 1971 on the quality of life for the aged caused consumer advocate Ralph Nader (b. 1934) to coin the term *eldercide* in describing nursing homes (Kelly, 2007).

New legislation, including the Moss and Miller amendments, attempted to address the issues of competent care and adequate compensation for facilities, but these problems remain a concern today. An equally important issue, however, was that home care and institutional care (nursing homes as opposed to poorhouses) continued to represent the primary choices available to the older population, regardless of their overall health and their various levels of need. Nursing homes, although an important component of overall care strategy, remain *total institutions* in that the lives, movements, and activities of residents are regulated to facilitate the efficiency of an organization providing care to a population whose needs ranged from minimum assistance to 24-hour intensive care. As a consequence, individuals with only mild limitations could find their movements severely restricted, and, in essence, they were required to surrender autonomy in exchange for care despite an ongoing ability to manage many of their daily activities. Similarly, many older adults, although desiring to remain in their homes, reached a point where their physical limitations made this dangerous if not impossible. Yet at the same time, the undesirable loss of independence associated with nursing home residence caused them to remain at home unattended despite an inability to successfully manage the complex tasks associated with unassisted living.

## THE FORMALIZATION OF THE ASSISTED LIVING MODEL

As a response to the limited choices available for care in later life, assisted living facilities have rapidly become a diverse middle ground in formal care systems that target older adults. Unlike the absolutes that tend to define home care and institutionalized care as the polar extremes of care provision, assisted living environments are often presented as a broad system of graduated care whereby providers offer services that are tailored to the specific needs of the older population at different stages in their aging life course. Assisted care facilities have expanded in number rapidly since the late 1980s because they fill a necessary niche in the health care marketplace. As a business model, Michael Keslosky and Glenn Stevens

***Holding Hands.*** *Senior citizens hold hands while sitting on a couch at the assisted living facility where they live. Both also suffer from Alzheimer's disease.* AP IMAGES.

(1999) identified four factors that have encouraged the growth of assisted living facilities: (a) Many seniors need assistance with some aspects of daily life but do not need the intensive care of a nursing home, (b) most seniors prefer to live independently as long as they possibly can, (c) the elderly value the ability to age in place, and (d) the largest market for senior housing is in the lower- to middle-income ranges. A fifth factor, not mentioned by Keslosky and Stevens but important nonetheless, was the increase in discretionary income within the retirement-aged population (Hungerford, Rassette, Iams, & Koenig, 2001–2002).

Because of the long-standing lack of intermediate forms of care, the assisted living industry has grown rapidly. This has had positive impacts as it has increased the number and types of support services available to older adults; however, as both definitions and regulatory control varies widely, this array of alternatives can also make it difficult for the general public to make informed decisions about which provider would be best for their needs. The National Center for Assisted Living (NCAL), an advocacy group for long-term care providers, reflects the positive aspects of assisted living as a resource for the aged by stating that about 1 million Americans live in assisted living facilities, including about 115,000 Medicaid recipients. The NCAL stated that many individuals and their families prefer assisted living housing because of its emphasis on residents' privacy, dignity, and choice (Polzer, 2008). In contrast, the formal definition provided by the National Center for Health Statistics (NCHS) introduced some of the complexities associated with defining assisted living facilities and reported the following:

> [Assisted living facilities] provide some assistance with activities of daily living and instrumental activities of daily living but do not provide round-the-clock skilled nursing services. Assisted living facilities and in-home assisted living care stress independence and generally provide less intensive care than that delivered in nursing homes and other long-term care institutions, but there is no standard definition of these places as they are licensed by individual States, if at all. (Bernstein et al. 2003, p. 213)

The definitions given by the NCHS and the NCAL are accurate representations of assisted living, but they represent very different interpretations of what assisted living is. The U.S. Department of Health and Human Services (2003) offers possibly the most reasonable definition, stating that assisted living facilities are "housing alternatives for older adults who may need help with dressing, bathing, eating, and toileting but do not require the intensive medical and nursing care provided in nursing homes." The variations in these definitions are driven by the contrasting missions of the organizations that create them. Advocacy groups such as NCAL tend to focus on licensed facilities that offer excellent care and represent the quality of care they seek to promote as the standard for their constituency. These groups also can provide invaluable services to the public who seek information to help them navigate though the complexities of planning for long-term care.

The NCAL, for example, has offered an annual report since 2001 that summarizes state regulation and oversight of licensed facilities and represents a valuable tool for the public that is informative and user-friendly. In contrast, the NCHS definition is driven by their role as a government agency with a primary focus on health and information dissemination. In this role the organization represents a valuable resource for the issues related to the risks of poor-quality care. The NCAL's definition, although emphasizing the significant benefits of dignity and needs-based care that makes assisted living such a valuable option, glosses over the payment issues and the very limited role that Medicare and Medicaid play in financing this form of care. Similarly, the NCHS definition fails to recognize the growth in both state licensing and professionalism in the assisted living industry entering the 21st century that have helped reduce some of the major abuses seen in the 1980s and 1990s, particularly in the care of older adults suffering from dementia (Tilly & Reed, 2006).

This wide gulf between advocacy and oversight will remain for the foreseeable future, as the term *assisted living* covers an increasingly wide array of circumstances. Again, referring to the U.S. Department of Health and Human Services (2003) summary, such facilities "may be part of a retirement community, nursing home, senior housing complex, or may stand alone. Licensing requirements for assisted living facilities vary by state and can be known by as many as 26 different names including: residential care, board and care, congregate care, and personal care." With this level of variation, it is difficult, if not impossible, to establish a common standard by which assisted living facilities can be evaluated and compared by either the consumer or the state and federal government.

Similarly, complexities and confusions over the financing of assisted living can make educated choices that much more difficult. As of 2008, Medicare and Medicaid insurance covers very little of the cost of assisted living, generally being applicable to the health care and treatment costs that these programs cover regardless of residence. Even the procedures and costs that are covered within assisted living facilities vary depending on the way individual states administer Medicare and Medicaid. In general, assisted living facilities represent a direct out-of-pocket expense to the individual, and costs can run from as low as $10,000 per year to $50,000 or more, comparable to the costs of many nursing homes. Entering the early 21st century, the growing availability of long-term care insurance that is intended to pay these costs has promise for the future, but at present it is still too new a concept to realistically evaluate.

Because this system is often organized around a mixed model of independent living in private apartments or suites, residents within assisted living facilities face many of the challenges that any normal tenant faces in terms of services, rights, and obligations, and in many cases they also need to meet minimum standards for self-care to remain within the facilities; otherwise, they are required to either transition into nursing care or leave the assisted care environment. The selection and negotiating process required to maximize the value of the assisted living experience can be extremely complex, and, like all late-life decisions, it works best when planned for well in advance.

## CONCLUSIONS

In the scheme of long-term care for older adults, assisted living facilities represent a relatively new and potentially invaluable alternative to home care, which is often stressful and inadequate, and to the total institution that is the nursing home model. Although still unregulated in any systematic manner and with wide variations in the quality of care across states, the assisted living model has grown both in popularity and professionalism in the past decade. Increasingly, older adults with minimal support needs can choose from a wide array of alternatives in terms of housing, services, and opportunities to make smooth transitions into more intensive levels of care as needs change. Still, there is much room for improvement. The industry needs to establish internal standards to better serve the needs of the consumer and to better explain the available choices. Funding models also need to change as the long-term care insurance matures and the costs of this investment begin to be felt by the providers. The level of involvement by the federal government, both in terms of financial assistance and

regulatory oversight, desperately needs to be addressed as the risks for abuse and mistreatment of older adults are a constant concern for the maturing assisted living system.

Overall, however, the current availability of assisted living facility services is an important and necessary improvement over past systems that left older adults, with only mild to moderate support needs, totally dependent on themselves or their families. It also provides an alternative to an early and often inappropriate move into formal nursing care, offering older adults additional years of the autonomy, productivity, and sense of independence that is essential to successful aging.

**SEE ALSO** Volume 3: *Aging in Place; Long-term Care; Policy, Later Life Well-Being; Retirement Communities.*

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*James W. McNally*

# ASSISTIVE TECHNOLOGIES

Technology is playing an increasingly important role in the lives of older Americans. By facilitating participation in daily activities and promoting independence, the use of assistive technology can influence life-course transitions related to retirement, living arrangements, and long-term care. About 14–18% of adults ages 65 or older use assistive devices (Cornman, Freedman, & Agree, 2005) and two-thirds of older people who report difficulty with personal care activities use a device to meet daily needs (Agree & Freedman, 2000).

## DEFINING ASSISTIVE TECHNOLOGY

Although there is no single agreed-on definition of assistive technology (also often referred to as assistive devices or special equipment), the Assistive Technology Act of 1998 defines assistive technology broadly as "any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities." This definition includes everyday items (so-called mainstream technologies) such as scissors and microwave ovens as well as specialized devices such as wheelchairs or chair lifts. For research purposes the following narrower definition is often used: items intended for and used by individuals to eliminate, reduce, or assist with impairments in functioning (Committee on Disability in America, 2007). Although medications and medical devices implanted in the body (such as pacemakers or artificial joints) can improve functioning, these items generally fall outside both policy and research definitions.

The Committee on Disability in America (2007) broadly categorized forms of assistive technology into (a) personal (or portable) devices, (b) environmental modifications, and (c) adaptive technologies. Within each category, devices may be used to assist with different impairments (such as lower body limitations, difficulty grasping, sensory impairments, or cognitive decline) or with specific tasks (such as walking, dressing, bathing, or managing medications). Personal assistive devices operate as an extension of a person's own capability, may be used in a variety of settings, and include items such as canes, wheelchairs, hearing and vision aids, medication reminders, and reachers or grabbers. Environmental modifications are items that are put into place to adapt a home or building to accommodate a person's disability and include items such as grab bars, raised toilet seats, ramps, wandering prevention systems, and stair glides.

"Smart homes" also incorporate the use of additional technologies including items such as sensors for detecting falls or devices for monitoring blood pressure (see William Mann's *Smart Technology for Aging,*

*Disability, and Independence* [2005] for further details). More comprehensive structural changes, such as widening doorways to accommodate a wheelchair, may also be considered an environmental modification, although this type of change is often excluded from examinations of assistive technology use. Finally, adaptive technologies can be used to make mainstream objects or devices accessible for individuals with differential functional capacities. For example, computers can be fit with screen readers and voice activation software for individuals with sensory impairments, and fixtures can be placed over appliance dials to make them easier for a person with limited hand strength to use.

Two additional concepts that are distinct from but related to assistive technology are durable medical equipment (DME) and universal design. DME is a coverage-related term used by Medicare, the public insurance program for adults age 65 and over, and Medicaid, the public insurance program for poor, blind, and disabled individuals. DME is a class of technologies that are deemed to be medically necessary, reusable, and prescribed by a physician for use in the home. Assistive technologies that fall outside the scope of this definition are generally not covered through Medicare. For low-income individuals, Medicaid can cover the portions of costs that are not covered by Medicare. In addition, Medicaid's state-administered community-based services waiver programs can provide additional funding for the purchase of some assistive technologies and home modifications, although these programs can vary widely across states (Freiman, Mann, Johnson, Lin, & Locklear, 2006).

Universal design refers to the development of "products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" and embraces seven basic principles (Center for Universal Design, 2008). Designs must be equitable for use by people with diverse abilities; be flexible to accommodate different preferences and abilities; be simple and intuitive to use; communicate information efficiently and clearly; minimize hazards and adverse effects of unintended use; be comfortable to use with minimum fatigue; and incorporate the appropriate size and space for use regardless of body size, posture, or mobility. Although it is not likely that an environment or product can accommodate every possible physical or emotional limitation, the spirit behind universal design is to develop products and environments that are accessible to the greatest number of people. Devices that incorporate universal design can be as simple as lever doorknobs or as complex as kitchen sinks that have clear knee space under the sink and adjustable heights so that both users who stand and those who are seated can use them comfortably.

## PEOPLE WHO USE ASSISTIVE TECHNOLOGY

Some individuals are more likely than others to use assistive technology. An individual's underlying capacity (need), various psychosocial factors, the fit between an individual and a device, and selected economic and sociodemographic characteristics all predict whether an individual will use assistive technology. Health and functioning tend to be the most important predictors of whether devices are used, with devices being used more by those with moderate and severe disability and least by those with mild disability (Verbrugge & Sevak, 2002).

Preferences for and attitudes about the use of assistive technology are also related to whether assistive devices are initially adopted and their use sustained. The benefits of device use may include improvements in performing tasks and an increased sense of security and safety. Iezzoni (2003), however, noted that the use of some assistive technologies, particularly those that are highly visible, may be associated with negative psychological consequences such as loss of abilities and independence. Negative feelings toward devices are associated with discontinued use of devices whereas more positive notions (e.g., thinking that devices provide independence and enable individuals to participate in a wider range of activities) are associated with their adoption and continued use (Gitlin, Schemm, Landsberg, & Burgh, 1996).

How well a device fits the needs and lifestyle of an individual also matters. For example, individuals are less likely to use devices that do not do what they were meant to do, do not fully meet the needs of the individual, or do not meet expectations about comfort, safety, and ease of use (Phillips & Zhao, 1993). Discontinuing the use of devices can also result from a lack of adherence to user preferences, inadequate training on the device, or the prescription of devices that are inappropriate or inadequate for the environment in which they are to be used (Iezzoni, 2003; Phillips & Zhao, 1993).

Less clear is the role of economic resources such as income and health insurance and sociodemographic characteristics. Even though more than half the costs of assistive technology are paid for out-of-pocket (Freiman et al., 2006), level of income does not consistently predict the use of assistive technology. For instance, among individuals with a need for assistance, some studies find no relationship between the use of assistive technology and level of income (Agree, Freedman, & Sengupta, 2004; Verbrugge & Sevak, 2002) and another finds that individuals with lower incomes tend to use assistive technology for mobility more often than individuals with the highest levels of income but individuals with incomes that fall in the middle are the most likely to use assistive

technology for bathing (Freedman, Martin, Cornman, Agree, & Schoeni, in press).

Because coverage of assistive technologies is quite limited in many cases, health insurance is also not strongly related to assistive technology use. Although Medicare provides limited coverage of DME to all adults age 65 and over, additional resources for the purchase of assistive technology could come from private insurance that supplements Medicare coverage, Medicaid, Medicaid waivers, benefits for veterans of the armed forces, or cash and counseling demonstration programs that provide a cash benefit to Medicaid recipients (available in about 15 states as of 2007). However, having these supplemental benefits does not translate into greater use of assistive devices (Agree et al., 2004).

Finally, variation in use by sociodemographic factors such as age, sex, race, and education also have been noted. Among individuals who require assistance (e.g., have difficulty with daily tasks), women and those with higher levels of education are more likely to use assistive technology, and rates of its use tend to increase with age (Agree et al., 2004; Freedman et al., in press). Evidence also suggests that ethnic and racial minorities who have a disability are more likely to use assistive technology for mobility difficulty and that non-White Hispanics are more likely to use assistive technology for bathing (Freedman et al., in press). Some of these differences across socioeconomic and demographic groups may be due in part to differences in the types of devices used, the adaptability of the home environment (such as being allowed to or having the resources to instill grab bars in the bathroom), receptivity to and attitudes about the efficacy of using devices, the desire for independence, or difference in expectations, preferences, and opportunities for using specific types of care (e.g., the use and availability of personal care versus devices).

## ASSISTIVE TECHNOLOGY AND LIFE-COURSE TRANSITIONS

Whether used alone or in combination with other accommodations, such as personal help or behavior change (e.g., changes in the way a task is done to compensate for functional difficulties), the use of assistive technology may have a number of positive outcomes, including improved functioning to facilitate independence, prolonged labor force participation, and reduced demand on and need for assistance from personal caregivers.

To live independently, older adults must be able to take care of their daily needs. The use of assistive technology can reduce or even eliminate difficulty with such tasks as dressing, reaching, walking, getting in and out of bed, and going to the toilet (Verbrugge, Rennert, & Maddans, 1997). Use of assistive technology and environmental modifications can also slow the rate of functional decline, potentially prolonging the ability to continue living in the community (Mann, Ottenbacher, Fraas, Tomita, & Granger, 1999).

One report on technology for adaptive aging (Pew & Van Hemel, 2004) noted that the use of assistive technology may also make it possible for adults to continue to work when they otherwise may have left the workforce. A number of changes in physical and cognitive abilities are common as individuals age, which can lead to difficulty in certain work situations. For example, vision loss can make it difficult to read a computer screen, and difficulty with fine motor skills can interfere with the ability to do assembly work or to use common computer input devices such as a mouse or keyboard. However, with assistive technologies such as screen magnifiers, large keyboards, or trackball pointing devices, difficulty with work tasks may be reduced. Although there is little research on the efficacy of assistive technology for enabling people to remain in the labor force, the workforce is getting older (e.g., the proportion of the labor force between 25 and 54 is declining) and employers may need to increasingly adapt the work environment to accommodate functional changes common to the aging process.

Finally, with the high costs associated with formal care and potentially high burden levels for informal caregivers, there is also interest in the potential for assistive technology to substitute for or take the place of personal assistance as well as the potential for assistive technology to reduce the costs of long-term care. In general, the use of assistive devices seems to reduce the amount of care received from another individual, but it rarely replaces human assistance altogether (Agree & Freedman, 2000; Allen, Foster, & Berg, 2001). However, the relationship between personal care and device use may depend on the specific devices used and an individual's underlying functional abilities. For instance, devices such as canes and crutches may reduce the number of hours of informal care needed, but items such as wheelchairs and walkers seem to supplement rather than substitute for the receipt of personal care (Agree & Freedman, 2000; Allen et al., 2001). Similarly, individuals reporting less severe difficulty with tasks are most likely to use equipment alone (potentially substituting devices for human assistance), but those with more severe difficulty are more likely to use equipment in combination with personal care (Agree et al., 2004; Verbrugge & Sevak, 2002). Finally, evidence also suggests that individuals using assistive devices, particularly canes, tend to have lower costs for in-home services and institutional care (Allen et al., 2001; Mann et al., 1999).

***Assistive Elderly Care.*** *A sensor on the left side of the refrigerator records and relays the opening and closing of the door. The refrigerator is monitored from a secure Internet site to make certain that senior citizens are getting food on a regular basis.* AP IMAGES.

**SEE ALSO** Volume 3: *Disability and Functional Limitation, Later Life; Health Care Use, Later Life; Media and Technology Use, Later Life; Sensory Impairments.*

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***Jennifer C. Cornman***

## BALTES, MARGRET
***1939–1999***

## BALTES, PAUL
***1939–2006***

Margret Maria Baltes, born in Dillingen, Germany, and Paul B. Baltes, born in Saarlouis, Germany, are two of the world's most prominent lifespan psychologists whose lifework substantially advanced the field of gerontology. They were married in 1963 and had two children—Boris (b. 1965) and Anushka (b. 1971).

Both received their bachelor's and master's degrees from Saarland University in Germany. After also receiving his doctorate in psychology from Saarland University in 1967, Paul Baltes took on his first academic position at West Virginia University, where Margret Baltes completed her doctorate in experimental psychology in 1973. They then both held academic positions in human development at Pennsylvania State University. In 1980 they moved to Berlin, Germany, where he became codirector of the Max Planck Institute (MPI) for Human Development and she became a professor of psychological gerontology at the Free University of Berlin.

Margret and Paul Baltes shared a particular interest in successful aging and the related dynamics between gains and losses. Together they coedited *Successful Aging: Perspectives From the Behavioral Sciences* (1990), an influential book that changed the scope of aging research from focusing on age-related loss of capacity to highlighting older adults' potentials and adaptive competencies. They also introduced one of the most internationally renowned theories of lifespan development: the model of selection, optimization, and compensation (SOC), which proposes three mechanisms thought to promote successful development and aging. In this model *selection* is understood as the principle giving direction to development by focusing a person on particular developmental goal options, *optimization* aims at achieving higher levels of functioning, and *compensation* focuses on using alternative means to maintain functioning in the face of developmental loss. They referred to the pianist Arthur Rubinstein (1887–1982) as a good example for use of SOC processes. Rubinstein once described in a television interview how he dealt with the consequences of aging: He reduced his repertoire to a smaller number of pieces (selection), practiced this smaller repertoire more often (optimization), and slowed down the speed of playing prior to fast passages to produce a contrast that enhanced the impression of speed in fast segments (compensation).

Margret Baltes was a behavioral scientist and gerontologist who enriched the field with valuable and innovative insights into how older persons manage their lives by social means and how it is possible to lead a productive life even with the functional limitations that often accompany old age. Her main contributions include research on dependence in old age, summarized in the book *The Many Faces of Dependency in Old Age* (1996). She conducted groundbreaking observational studies in nursing homes, in which she drew on behavioral concepts such as reinforcement contingencies to explain the direct relationship between professionals' ignoring of patients' independence and enforcement of patients' dependent behavior, resulting in enhanced levels of dependence among patients.

Besides bringing the role of the social environment in caregiving settings to the fore, she also refined the concept of proxy control (exerting control indirectly by enlisting another's help or relying on external means), initiated innovative research on cognitive plasticity in aging by using the testing-the-limits approach as a detection means for early dementia, and developed a model of everyday competence by distinguishing basic (e.g., self-care) and expanded (e.g., leisure and social activities) levels of competence in the Berlin Aging Study (BASE). Marked by her interest in social dynamics, she also proposed a collective perspective for the SOC model to look at how adaptive processes evolve in couples, families or groups, and even societies. Finally, she successfully engaged in translating her research into concrete applications (e.g., training programs for the nursing staff), and she was an important advocate for older adults in policy making throughout her career.

Paul Baltes played a key role in establishing lifespan developmental psychology as an internationally acknowledged discipline, criticizing the predominant focus of developmental psychology on childhood and growth. One key contribution he made to the field was introducing the

***Paul and Margret Baltes.*** PHOTO COURTESY OF BORIS BALTES.

notion that development includes the whole lifespan characterized by gains and losses as well as biological and cultural influences (e.g., he created a metamodel of the incomplete architecture of human ontogeny, stating that because human development was not optimized by evolution, loss becomes predominant in old age, which can be compensated by culture, but that the effectiveness of culture also becomes increasingly limited with advancing age). Another contribution of importance was his advancement of the measurement of developmental change and plasticity (e.g., he provided groundbreaking methodological reflections on the distinction between age, cohort, and period effects and advanced the testing-the-limits paradigm).

His work was characterized by an interdisciplinary orientation, connecting psychological, sociological, and biological perspectives of aging, as manifested in his initiating and chairing of the BASE, a large-scale multidisciplinary study of the old (*third age*) and oldest old (*fourth age*). Furthermore, he developed several paradigms, such as the dual-process model of cognitive development, which distinguishes mechanics and pragmatics of intelligence with differential age-related trajectories (i.e., the decline in mechanics and increase in pragmatics), and the Berlin wisdom paradigm—defining wisdom as expert knowledge about fundamental problems of life meaning and conduct and providing criteria to guide the study of wisdom.

Both Margret and Paul Baltes and were devoted to promoting the careers of young scientists; she founded the graduate program Psychiatry and Psychology of Aging, a joint effort connecting MPI and Berlin universities. Paul Baltes initiated the International Max Planck Research School called The Life Course: Evolutionary and Ontogenetic Dynamics (LIFE) (hosted by the MPI), which involves collaborative graduate study at the University of Michigan, the University of Virginia, the MPI, the Free University of Berlin, and Humboldt University in Berlin.

Their years in Berlin were marked by a stronger realization of the problems evolving in the fourth age. Though findings from the BASE had shown enormous plasticity in the third age, they also indicated a bleaker ontogenetic picture among the oldest old. However, their focus was still more on the rich potential of the third age and the need to find ways of using it more creatively. Their Berlin years were also characterized by very close connections to American academic institutions through their participating in many international collaborations and accepting appointments as visiting professors and scholars at Stanford and the University of Virginia. This time period was tragically altered by Margret Baltes' sudden death in 1999 at age 59. In the following years, Paul Baltes' work was characterized by even more awareness of the last phase of life and its problems and his initiatives to integrate a wider variety of disciplines into the study of aging (e.g., law, art history, and mathematics)—as manifested by his last coedited book *Lifespan Development and the Brain: The Perspective of Biocultural Co-Constructivism* (2006) and in founding and directing the MPI International Research Network on Aging. Paul Baltes passed away in the fall of 2006, at the age of 67.

Margret and Paul Baltes's enormous productivity and contributions are evident in many acclaimed books, hundreds of scholarly papers, accomplishments honored with several international awards, honorary doctorates at many European and American universities, editorial positions for numerous respected publications, as well as by the many young scientists whose lives and careers they influenced and supported, and that they continue to support through the Margret and Paul B. Baltes Foundation, which is dedicated to the advancement of research in lifespan psychology and gerontology.

**SEE ALSO** Volume 3: *Aging; Cognitive Functioning and Decline; Quality of Life; Stress in Later Life; Theories of Aging.*

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***Kathrin Boerner***
***Daniela Jopp***

## BENGTSON, VERN
***1941–***

Vern Bengtson, an American sociologist, social psychologist, and human developmentalist, is known primarily for his contributions to family theory and research on the topic of adult intergenerational relationships. Bengtson developed the *intergenerational solidarity paradigm*—a conceptual model that has become the gold standard in measuring social cohesion between generations. Bengtson also originated and, for 35 years, directed the Longitudinal Study of Generations (LSOG), the project with which he is most closely identified.

An only child of Swedish descent, Bengtson was born in Lindsborg, Kansas, on May 2, and had a peripatetic early childhood. At the age of 2, he and his mother moved to North Carolina where his father was stationed in the Army. Half a year later they moved to Stromsberg, Nebraska, to live on his grandfather's farm while his father was overseas. At the age of 5, after his father came back from World War II (1939–1945), he and his family moved to Denver, Colorado, and 1 year later to Wausa, Nebraska. When Bengtson was 9 his family settled in Hilmar, a small agricultural town in central California, where he graduated from high school in June 1959. He attended North Park College in Chicago and received his B.A. in 1963. As a junior in college, Bengtson met his future wife, Denise, whom he married in 1965. After becoming a widower in 1977, Bengtson married his second wife, Hannah, in 1983.

Bengtson attended graduate school at the University of Chicago where, in 1967, he earned a Ph.D. in human development and social psychology. Under the guidance of Bernice Neugarten (1916–2001), an engaged and intellectually demanding mentor, and Robert Havighurst (1900–1991), Bengtson was inspired by the scholarly fervor he experienced at the University of Chicago's Committee for Human Development at a time when it was building the intellectual architecture for the emergent and interdisciplinary field of adult development and aging.

Bengtson's only academic post was at the University of Southern California (USC). He began in the department of sociology in 1967, eventually splitting his appointment with the fledgling Davis School of Gerontology. In 1989 he was appointed American Association for Retired Persons university professor of gerontology. While at USC Bengtson established a significant research program on families and aging and, for several decades, directed a multidisciplinary training program in aging research.

In 1970 Bengtson's scholarly interest in the *generation gap* spawned one of the most enduring studies in the social sciences: the LSOG, a study of families spanning three generations. The conceptual core of the study was intergenerational solidarity, a construct that described the

***Vern Bengtson.*** **PHOTO COURTESY OF VERN L. BENGTSON.**

emotional, normative, structural, and behavioral factors that bind the generations. In 1985 Bengtson received funding from the National Institute on Aging to make the study longitudinal and to focus on issues pertinent to aging. Drawing from the emerging life course perspective, he added the notion of family time—the metabolism of family life—to that of biographical and historical time in coming to grips with the ways intergenerational relationships develop and change.

As the study progressed through the 1980s and 1990s, families changed in ways that were difficult to predict when the study started: The protest generation moved into careers and family life; women entered the labor force in large numbers; divorce and remarriage became more prevalent; nuclear families became smaller but more complex; and multigenerational families became increasingly common. In 1991 members of the fourth generation—great-grandchildren in the original family lineages—were added to the study. This provided additional leverage in employing a unique research design that could compare family members in the same lineages across historical periods over

which substantial social change had occurred. Most important, each of the linked generations could be assessed at the same chronological age, a feature used in Bengtson's *How Families Still Matter* in 2002.

In developing the LSOG, Bengtson blended a social psychologist's appreciation for the importance of studying multiple perspectives, a sociologist's understanding of social movements, and a developmentalist's appreciation of life course dynamics. His observation that solidarity was persistent over long periods of time (combined with increases in the co-survival of generations) led Bengtson to conclude that adult intergenerational relationships had become increasingly important between the 1970s and the present (the topic of his 1998 Burgess Award lecture). He coined the term *beanpole family* (a name reflecting his rural roots) to describe the vertical extension and horizontal attenuation of family lineages due to increased longevity and reduced fertility.

Bengtson has more than 250 scholarly publications to his credit. He wrote often about the importance of theory to the fields of gerontology and family science, serving as editor of several editions of the *Handbook of the Theories of Aging* and as editor-in-chief of the *Sourcebook of Family Theory and Research*. Bengtson received many honors and awards for his work, including the Ernest W. Burgess Award for outstanding career achievement, the Reuben Hill Award for outstanding contribution to research and theory (both from the National Council on Family Relations), the Distinguished Scholar Award from the American Sociological Association Section on Aging, and two Merit Awards from the National Institute on Aging. He also served as president of the Gerontological Society of America in 1990.

Bengtson retired from his academic position at USC in 2006 and moved with his wife, Hannah, to join their children and grandchildren in Santa Barbara, California. As of 2008, he continues his research with a project funded by the Templeton Foundation that studies the transmission of religion across generations. In attempting to reconcile the dialectic between change and continuity within families, Bengtson's most recent work continues to delve into what remains an enduring paradox in the study of intergenerational relationships.

**SEE ALSO** Volume 2: *Parent-Child Relationships, Adulthood;* Volume 3: *Grandparenthood; Parent-Child Relationships, Later Life; Theories of Aging.*

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***Merril Silverstein***

## BLINDNESS

**SEE** Volume 3: *Sensory Impairments.*

# C

## CANCER, ADULTHOOD AND LATER LIFE

*Cancer* refers to a group of diseases in which abnormal cells grow and progress through the body. It is the second-leading cause of death in the United States, behind heart disease, and the major cause of death among persons younger than age 85. Cancer's etiology includes both internal (e.g., hormones and inherited genes) and external (e.g., exposures to environmental toxins and infectious organisms) factors, often acting in concert.

### CANCER INCIDENCE ACROSS THE LIFE CYCLE

As a general rule, one's risk of developing cancer increases with each decade of life, with the majority of cancers disproportionately affecting persons aged 55 years and older. This rate is especially pronounced for the four most prominent cancer sites, namely prostate, breast, colon, and lung.

Prostate cancer affects 1 in 39 men between the ages of 40 and 59 years. These odds increase to 1 in 14 men between the ages of 60 and 69 years and 1 in 7 men ages 70 and older. Between 1975, when the National Cancer Institute (NCI) first began to collect data systematically, and 2004, rates of prostate cancer decreased significantly for Black men over the age of 65 years, but remained unchanged for Black men under the age of 65 years, and all White men. Data on incidence rates (the number of new cancer cases in the United States in a given year, usually presented as rate per 100,000) among Asian/Pacific Islanders, Hispanic, and Native American/Alaska Native men were first reported in the mid-1990s. The three ethnic groups have experienced no change in overall incidence rates since that time (Ries, Melbert, Krapcho, Mariotto, Miller, Feuer, et al., 2007)

Cancer of the breast is the most frequently diagnosed cancer among women. Breast cancer affects 1 in 210 females under age 39 years, 1 in 25 females between the ages of 40 and 59 years, 1 in 27 females ages 60 to 69, and 1 in 15 females ages 70 and older. Incidence rates for breast cancer in women increase slightly during menopause, most likely a result of changes in hormone levels. Incidence rates for breast cancer in Black women under 50 years of age, as well as for all White women, have decreased significantly from 1975 to 2004, while incidence rates among Black women over 50 years of age have remained unchanged. Since the mid-1990s, when data were first collected, incidence rates among Hispanic, Asian/Pacific Islander, and Native American/Alaska Native women remained unchanged.

For men, the odds of developing colorectal cancer increase from 1 in 107 for ages 40 to 59 years, to 1 in 60 for ages 60 to 69 years, to 1 in 20 for ages 70 years and older. A similar pattern is observed among women, in which risk increases from 1 in 138 for ages 40 to 59 years, to 1 in 86 for ages 60 to 69 years, to 1 in 22 for ages 70 and older. Between 1975 and 2004, incidence rates for White men and women and Black women decreased significantly, whereas those of Black men remained unchanged. Incidence rates have also remained stable for Native American/Alaskan Native men and women, Hispanic men and women, and Asian/Pacific Islander women since the mid 1990s, when data were first collected. A significant decrease in incidence rates for colorectal cancer is seen only among Asian/Pacific

| | | Birth to 39 (%) | 40 to 59 (%) | 60 to 69 (%) | 70 and Older (%) | Birth to Death (%) |
|---|---|---|---|---|---|---|
| All sites† | Male | 1.42 (1 in 70) | 8.69 (1 in 12) | 16.58 (1 in 6) | 39.44 (1 in 3) | 45.31 (1 in 2) |
| | Female | 2.03 (1 in 49) | 9.09 (1 in 11) | 10.57 (1 in 9) | 26.60 (1 in 4) | 37.86 (1 in 3) |
| Urinary bladder‡ | Male | .02 (1 in 4381) | .41 (1 in 241) | .96 (1 in 105) | 3.41 (1 in 29) | 3.61 (1 in 28) |
| | Female | .01 (1 in 9527) | .13 (1 in 782) | .26 (1 in 379) | .96 (1 in 105) | 1.14 (1 in 87) |
| Breast | Female | .48 (1 in 210) | 3.98 (1 in 25) | 3.65 (1 in 27) | 6.84 (1 in 15) | 12.67 (1 in 8) |
| Colon & rectum | Male | .07 (1 in 1342) | .93 (1 in 107) | 1.67 (1 in 60) | 4.92 (1 in 20) | 5.79 (1 in 17) |
| | Female | .07 (1 in 1469) | .73 (1 in 138) | 1.16 (1 in 86) | 4.45 (1 in 22) | 5.37 (1 in 19) |
| Leukemia | Male | .16 (1 in 640) | .22 (1 in 452) | .35 (1 in 286) | 1.17 (1 in 86) | 1.49 (1 in 67) |
| | Female | .12 (1 in 820) | .14 (1 in 694) | .20 (1 in 491) | .75 (i in 132) | 1.05 (1 in 95) |
| Lung & bronchus | Male | .03 (1 in 3146) | 1.09 (1 in 92) | 2.61 (1 in 38) | 6.76 (1 in 15) | 8.02 (1 in 12) |
| | Female | .04 (1 in 2779) | .85 (1 in 117) | 1.84 (1 in 54) | 4.52 (1 in 22) | 6.15 (1 in 16) |
| Melanoma of the skin | Male | .13 (1 in 775) | .53 (1 in 187) | .56 (1 in 178) | 1.32 (1 in 76) | 2.04 (1 in 49) |
| | Female | .21 (1 in 467) | .42 (1 in 237) | .29 (1 in 347) | .62 (1 in 163) | 1.38 (1 in 73) |
| Non-Hodgkin lymphoma | Male | .14 (1 in 735) | .45 (1 in 222) | .57 (1 in 176) | 1.56 (1 in 64) | 2.14 (1 in 47) |
| | Female | .08 (1 in 1200) | .32 (1 in 313) | .44 (1 in 229) | 1.30 (1 in 77) | 1.83 (1 in 55) |
| Prostate | Male | .01 (1 in 10373) | 2.59 (1 in 39) | 7.03 (1 in 14) | 13.83 (1 in 7) | 17.12 (1 in 6) |
| Uterine cervix | Female | .16 (1 in 631) | .29 (1 in 346) | .14 (1 in 695) | .20 (1 in 512) | .73 (1 in 138) |
| Uterine corpus | Female | .06 (1 in 1652) | .70 (1 in 142) | .81 (1 in 124) | 1.28 (1 in 78) | 2.49 (1 in 40) |

*For people free of cancer at beginning of age interval. † All sites exclude basal and squamous cell skin cancers and in situ cancers except urinary bladder. ‡ Includes invasive and in situ cancer cases.

SOURCE: DevCan Probability of Developing or Dying of Cancer Software, Version 61.0 Statistical Research and Applications Branch, National Cancer Institute, 2006. www.srab.cancer.gov/devcan.

***Table 1.*** *Probability of developing invasive cancers over selected age intervals by sex, 2001 to 2003.* CENGAGE LEARNING, GALE.

Islander men. The decrease in this group likely has to do with who immigrated between the mid-1990s and 2004.

The probability of men developing lung cancer increases with age. Between ages 40 to 59 years, 1 in 92 men develop lung cancer. This increases to 1 in 38 among men ages 60 to 69 years, and 1 in 15 in men for those ages 70 and older. The risk of developing lung cancer likewise increases with age among women, from 1 in 117 between the ages of 40 and 59 years, to 1 in 54 for ages 60 to 69 years, and 1 in 22 for ages 70 and older. Over time, however, a decrease in incidence has been observed for Black and White men and women under the ages of 65 years, as well as for both Black and White men over the age of 65 years. Between 1975 and 2004, incidence rates of lung cancer increased only for Black women, ages 65 and older. National Cancer Institute data collected between the years 1995 and 2004 show a significant annual percentage decrease in rates of lung cancer among Hispanic men and women as well as among Asian and Pacific Islander men. For Asian/Pacific Islander women and Native American/ Alaskan Native men and women, incidence rates remained unchanged during that period of time.

## CAUSES AND CORRELATES OF CANCER

While both internal and external factors contribute to cancer incidence and mortality, a small percentage of all cancer cases (i.e., 5–10% for female breast, 10–15% for lung and prostate, and 20% for colorectal) are thought to be caused by hereditary mutations (Gronberg, 2003; Lynch and de la Chapelle, 2003; Olopade, Fackenthal, Dunston, Tainsky, Collins, and Whitfield-Broome, 2003; Schwartz, 2004). The overwhelming majority of cancers, however, result from sporadic or acquired mutations. These mutations occur spontaneously over the life course in response to environmental phenomena and may help to explain the relationship between cancer and age. In addition, changes in physiology occur over time that may sensitize the body to environmental insults, such as exposure to environmental toxins and occupational hazards that disproportionately affect vulnerable populations, and attenuate the effects of health behaviors, such as high-fat diets, sedentary life styles, and smoking.

Living in poverty is also associated with cancer incidence and mortality, in a number of ways. The so-called "food deserts" noted in inner-city neighborhoods, which limit the availability of healthful foods such as fresh produce, are associated with the development of cancer (Wrigley, 2002). Likewise, high-technology cancer treatments that increase odds of survival are less likely to be part of health services in those inner-city neighborhoods.

## CONSEQUENCES OF THE ONSET OF CANCER

The point in the life cycle at which a cancer is diagnosed affects both the course of cancer and response to its

treatment. Although aggressive cancer treatments such as adjuvant chemotherapy (treatment following surgery) improve survival among all persons, older adults are less likely than younger persons to be offered these treatments. They also are more likely to be undertreated (that is, less likely to be offered treatment and less likely to accept proffered treatment) (Bouchardy, Rapiti, Blagojevic, Vlastos, and Vlastos, 2007). It has been proposed that older adults with co-morbidities, physical disabilities, and cognitive and functional impairments respond less well to cancer treatments and are more subject to adverse outcomes, but this view is still under debate (Bouchardy, et al., 2007; Rodin and Mohile, 2007).

Older adults are significantly more likely to be diagnosed with new cancers than other age groups and also more likely to be socially isolated. Thus cancer may come at a time when social networks have been diminished, increasing the burden of some older adults with cancer. This lack of support almost certainly influences medical decision making and ability to cope with the disease and its treatment.

## DIFFERENCES ACROSS RACE AND CLASS

Group differences in the incidence of cancer occur by race, gender, and social class, as do differences in mortality. On the whole, African Americans are more likely to develop prostate, colorectal, and pancreatic cancer; and Whites to develop breast cancer, leukemia, and skin cancer (Ries et al., 2007). Hispanic women have the highest rates of cervical cancer. It is dangerous to generalize, however, because variation occurs even within racial/ethnic groups. Although Asian Americans/Pacific Islanders have the lowest incidence of breast cancer, for example, Native Hawaiians have particularly high incidence.

When cancers develop also varies by race. In West Africa, the geographic area from which African Americans, and their genes, originated, breast cancer appears prior to menopause in 74% of cases, whereas among White women, the odds of developing the disease increase with each year after menopause (Olopade et al., 2003). There is evidence that African-American women disproportionately experience the earlier, more aggressive form of breast cancer seen among women in West Africa. Little is known, however, about breast cancers among other groups.

The reasons that have been given for these racial and ethnic differences combine biological and environmental factors (Gehlert, Sohmer, Sacks, Mininger, McClintock, and Olopade, 2008). Although breast cancers can be classified into the same five identified subtypes (basal-like, erbb2+, "normal," luminal B, luminal A) experienced by women in the general population and White women, the proportion of subtypes varies by race. Basal-like tumors are more common among African-American than White women and are harder to treat. Yet because 70% to 80% of breast cancers are due to sporadic rather than hereditary gene mutations, environmental factors are thought to "get under the skin" to influence the body's natural ability to repair the day-to-day mutations that occur routinely.

Social class, the effects of which are difficult to disentangle from those of race in the United States, is also associated with cancer incidence and mortality. For all races as well as for Black and White adults considered separately, breast cancer survival rates varied by percent of census tracts living below the poverty line (Ries et al., 2007). Cancer incidence is also associated with social class: Individuals from lower social classes have higher rates of all cancers (Ward, Jemal, Cokkinides, Singh, Cardinez et al., 2004). This is, in part, because social class predicts access to education and health insurance coverage and occupational status. Class also predicts exposure to environmental toxins such as industrial waste, social stressors, and access to foods that may protect against cancer.

Health scholars from the biological, behavioral, and social sciences are beginning to understand the myriad factors that influence cancer development, treatment, and outcomes as they relate to adulthood and later life. Medical researchers' approach, however, must become more sophisticated and incorporate the multiple levels of influence on the disease, including biological and societal factors and how the two may interact. Considering both when conducting research will better allow researchers to target interventions.

**SEE ALSO** Volume 3: *Chronic Illness, Adulthood and Later Life; End of Life Decision-Making; Health Behaviors, Later Life; Health Care Use, Later Life; Health Differentials/Disparities, Later Life.*

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***Sarah Gehlert***

# CARDIOVASCULAR DISEASE

Cardiovascular disease (CVD) is common among older adults and is the leading cause of morbidity and mortality in that age group. Some conditions include atherosclerosis, coronary heart disease, heart failure, valvular disease and arrhythmias. A growing number of individuals can expect to live with CVD for a significant portion of the life span. The determinants of CVD include biological, social, psychological, and behavioral factors. Treatment can improve symptoms and promote survival; nonetheless, the impact of CVD can be severe, as can treatment demands and side effects. Effective CVD management, which requires medication adherence and changes in diet and exercise patterns, is influenced by social-cultural and psychological factors.

## PREVALENCE

Approximately 80% of persons in the United States over age 60 have CVD (Rosamund et al., 2008). It is the most common diagnosis in that age group and, as the leading cause of death in the elderly (Centers for Disease Control, 2003), is also costly, with estimated indirect and direct annual costs of $448.5 billion (Rosamund et al., 2008). From 2000 to 2030 the number of older adults in the United States is expected to double (Centers for Disease Control, 2003). Concomitant increases in CVD morbidity, mortality, and costs are likely to occur as well.

## CVD AND AGING

Atherosclerosis, coronary heart disease, heart failure, hypertension, arrhythmias, and valvular diseases are common in older individuals. The increasing risk of such conditions in later life may reflect the increasing lifespan and thus account for the age-related changes in the cardiovascular system, including increases in systolic blood pressure and left ventricular mass, alterations in blood vessels, and reductions in maximal heart rate, cardiac output, and aerobic capacity (Schwartz & Zipes, 2008). These changes may be related to alterations in the autonomic nervous system, oxidative damage, inflammatory responses to stress and cell death (Schwartz & Zipes, 2008). In addition, increases in a high fat and cholesterol diet and a sedentary life style is credited with much of the current cohort-associated diseases that we are discussing.

## ATHEROSCLEROSIS AND CORONARY HEART DISEASE

Coronary heart disease (CHD) is caused by atherosclerotic changes in the inner walls of arteries that supply the heart muscle with blood. Fat deposits within the blood vessels activate macrophage white blood cells, causing inflammation and plaque formation. These narrow the blood vessels and obstruct blood flow. This process may begin early in life and progress asymptomatically for decades. CHD occurs when gradual vessel narrowing becomes severe or when plaque ruptures and initiates a platelet-clotting cascade that culminates in thrombosis that suddenly obstructs blood flow further. This process of blood vessel narrowing is stopped only with medications, diet change, and exercise.

Myocardial ischemia is the result of an inadequate supply of oxygenated blood to the heart and can produce angina pectoris, a syndrome of chest pain and other symptoms. However, myocardial ischemia can be asymptomatic and cause sudden death without warning. Although 50% of men and 64% of women who die suddenly of CHD have no previous symptoms of this disease, some data suggest that 95% of symptomatic respondents accurately recognized chest pain as a myocardial ischemia symptom (Rosamund et al., 2008). Prolonged ischemia can cause a portion of heart muscle to die, leading to myocardial infarction (MI, or"heart attack"). The average age of having a first MI is younger for men (65.8) than for women (70.4; Rosamund et al., 2008), possibly reflecting premenopausal protective effects of estrogen among women.

## HEART FAILURE

In heart failure, a damaged heart is unable to pump adequately. The left side of the heart pumps blood that has been oxygenated in the lungs to the organs (systemic

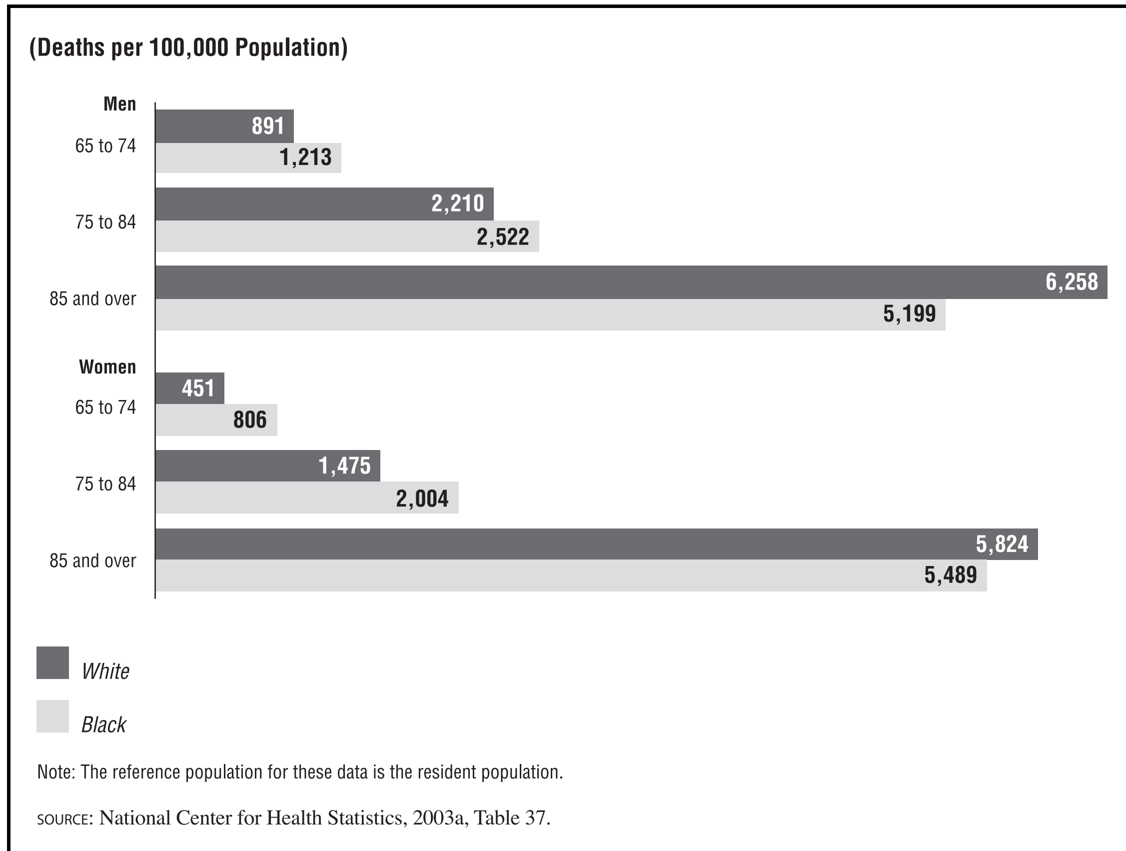


***Figure 1.*** *Death rates for diseases of the heart among people aged 65 and over by age, sex, and race, 2000.* CENGAGE LEARNING, GALE.

circulation), and the right side pumps blood returned from the tissues to the lungs for gas exchange (pulmonary circulation). Impaired systemic circulation can reduce blood supply to organs and cause pulmonary congestion and shortness of breath. Failure of pulmonary circulation can lead to congestion of peripheral tissues and swelling in the lower extremities. The incidence of heart failure is approximately 10 per 1,000 persons among those age 65 and older (Rosamund et al., 2008).

### HYPERTENSION

Hypertension is chronically elevated blood pressure, often as a result of reduced vascular elasticity. Hypertension is a major risk factor for CHD, stroke, heart failure, and kidney disease because it puts an enormous strain on the heart and on blood flow. Approximately 68% of individuals age 65 and older are hypertensive (Rosamund et al., 2008).

### ARRHYTHMIAS

An arrhythmia is any disturbance in electrical activity of the heart that causes an abnormal rhythm. Arrhythmias commonly diagnosed in older persons include atrial tachycardia (rapid heartbeat) and fibrillation (irregular heartbeat). Among the outcomes of arrhythmias are stroke, cardiac arrest, and sudden cardiac death.

### VALVULAR DISEASE

The valves of the heart are made up of leaflets that control the flow of blood with each heart beat. The leaflets become thickened with age and stiffen; they can also be damaged by infections and by bacteria such as streptococcus. When damaged, they become leaky and interfere with flow not only throughout the body but also to the coronary vessels on the heart surface. To prevent strokes and blood clots, medication adherence is critical.

### RISK FACTORS

The traditional risk factors for atherosclerotic CVD are older age, male gender, high total cholesterol levels, hypertension, family history, cigarette smoking, and diabetes. Also implicated are obesity, a sedentary lifestyle, a high fat and carbohydrate diet, low levels of high-density lipoprotein cholesterol, high levels of triglycerides, and

high levels of C-reactive protein and other inflammatory markers. Most risk factors have psychosocial and behavioral influences, and those influences also may promote CVD independently of better-established predictors. Potential psychosocial risk factors for CVD include social isolation, loss of spouse or never-married status, transition to retirement, low socioeconomic status (SES), racial/ethnic minority status, religious involvement, type A behaviors (especially hostility), psychological stressors, depression, and anxiety. It is not necessarily the biology of race and gender that elevates CVD risk. Rather, both traits are associated with a variety of social resources and disadvantages, which may shape one's risk of CVD These characteristics are also thought to promote CVD through direct physiological effects and/or by altering health-related behaviors. Some factors, such as gender, race, and SES, cannot be modified, whereas others may be altered through policy changes in health care and educational systems.

In the United States, CVD disproportionately affects African Americans, Hispanic Americans, and Mexican Americans, persons with low SES, and residents of the Southeast and Appalachia (Mensah, Mokdad, Ford, Greenlund, & Croft, 2005). The independent effects of poverty, minority status, and SES are difficult to disentangle. Individuals from disadvantaged backgrounds may be less educated about warning signs or may have cultural beliefs that clash with Western medicine. Additional challenges include the cost of seeking care, proximity to treatment centers, and racial/ethnic discrimination in treatment seeking. However, health care availability and accessibility do not account fully for the inverse relationship between SES and CVD. Whatever the mechanism, a greater portion of life spent in adverse SES conditions appears to increase the risk for MI (Ljung & Hallqvist, 2006).

CVD incidence among menopausal women approximates that among men of the same age. Biological factors specific to women, including postmenopausal estrogen deficiency and altered arterial structure, may delay the diagnosis and promote complications or poorer recovery. The belief among patients and practitioners that CVD is a "male" disease and sex differences in clinical manifestations may lead to underestimation of treatment urgency (Martin & Lemos, 2002), improper utilization of medical services, and unclear indications for medications or procedures. For example, whereas men with acute MI tend to complain mostly about chest pain, women tend to present with atypical symptoms, including abdominal pain, dyspnea, cold sweat, nausea, back and neck pain, indigestion, palpitations, and unexpected fatigue. It is hypothesized that the vagueness of these symptoms may result in delayed help-seeking behavior and increased disease progression. Other factors that contribute to CVD risk in women include a greater prevalence of emotional distress and mood disorders and lower average SES.

Risk factor potency may change from middle adulthood to late life. The effects of hypertension, cholesterol, smoking, and high body mass index may decline with advancing age, whereas diabetes elevates CHD risk across all age groups (Abbott et al., 2002). Nonetheless, older adults without previous cardiovascular events may have significant subclinical or nonsymptomatic vascular disease. Physicians therefore may need to be more vigilant in identifying (lower the threshold for defining) CVD disease in older individuals, attending to even modest elevations in certain risk factors.

## TREATMENT AND MANAGEMENT

Treatment of CVD has improved significantly over the past few decades with the development of thrombi-dissolving drugs, percutaneous transluminal coronary angioplasty (PTCA), and coronary artery bypass grafting (CABG) surgery. In PTCA a balloon is inserted into the occluded vessel and inflated to compress plaque and restore blood flow. A stent (metal scaffold) usually is inserted to keep the vessel open. In CABG, occluded coronary artery segments are bypassed with grafts taken from healthy vessels elsewhere in the body. Evidence suggests that the more beneficial procedure for patients with advanced CVD is CABG (Hannan et al., 2008), which improves survival, reduces recurrence, relieves angina, and enhances the quality of life.

Postintervention patients typically are prescribed medications to decrease the risk of recurrent CVD and mortality. These medications may include cholesterol-controlling, antihypertensive, antiarrhythmic, and/or antithrombotic agents. Drug effectiveness requires long-term continuous treatment. The benefits for those 65 and older are similar to those for younger individuals. Recommended lifestyle changes for CVD patients include smoking cessation, a low-fat and low-salt diet, and increased physical activity. These are also the secondary prevention tools to control and reverse disease in the coronary vessels to avert obstruction and decrease plaque. Secondary prevention are the treatment regimens that are recommended to control a chronic illness after it has been diagnosed.

Medication nonadherence is prevalent and is linked to increased morbidity and mortality. Adherence (taking medications as prescribed by the physician) is suboptimal both after acute CHD and in the larger population of individuals with poor lipid profiles. Nonadherence increases early and rapidly after the initial prescribing of medication, and approximately 65% of patients are nonadherent after 5 years (Benner et al., 2002). Thus, there is

significant room for improved secondary prevention for CHD in the older segment of the population.

### SOCIAL AND PSYCHOLOGICAL INFLUENCES ON DISEASE MANAGEMENT

Predictors of medication underuse among individuals over 65 include age, social isolation, depression, and dementia. Although older patients can be highly adherent, the oldest-old (over 77 years) have greater difficulty than do young-old adults (60 to 77 years) in comprehending medication information, which may promote nonadherence (Park, Morrell, Frieske, & Kincaid, 1992). Across age groups females tend to engage in less risk reduction behavior than males.

Because most well-established predictors of nonadherence are nonmodifiable, variables that account for their relationships with secondary prevention behaviors and that are modifiable are being sought. Salient among those predictors are patients' beliefs about CVD and its treatment. Secondary prevention may be undermined when patients overemphasize advancing age or stress as a major cause of CHD while failing to recognize the importance of medication, diet, and exercise; this may be especially likely to occur in women (Cameron, Petrie, Ellis, Buick, & Weinman, 2005). The belief that CVD cannot be controlled, failure to acknowledge illness severity, and the notion that PTCA or CABG is a permanent cure also may discourage secondary prevention. Expectations about the positive consequences of cardiac risk-reduction behaviors may explain why some patients are adherent, but false expectations of negative side effects can discourage adherence. Psychosocial factors, beliefs, and behaviors clearly play a significant role in CVD management and provide opportunities for research and intervention.

**SEE ALSO** Volume 3: *Chronic Illness, Adulthood and Later Life; Epidemiologic Transition; Health Behaviors, Later Life; Health Care Use, Later Life; Health Differentials/Disparities, Later Life.*

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## CAREGIVING

Caregiving is the provision of regular unpaid help to an individual who, because of limited physical or cognitive abilities, is dependent on others for managing activities of daily life. Caregiving represents a broad range of activities that includes providing personal care, doing household chores, preparing meals, shopping, taking care of finances, providing companionship, regular checkups, arranging and supervising activities and outside services, and coordinating medical care. Because of the voluminous empirical literature on the topic, this entry limits its scope to caregiving that involves older adults, primarily

focusing on care provided in the immediate family and particularly within intergenerational relationships. Intergenerational caregiving can be divided into two general types: older adults as recipients of care from adult children (upstream caregiving), and older adults as providers of care to grandchildren and disabled adult children (downstream caregiving). Although both upstream and downstream caregiving have unique antecedents and target populations—with the former being more normative and based on disability, and the latter being more extraordinary and based on social conditions—both involve older adults and many of the same care activities.

There is no standardized method for identifying caregivers. Some studies define caregivers based on the number of hours they contribute to care. For example, one study identified primary caregivers as those who either lived with a relative with dementia or who provided at least 8 hours of care per week for an older relative living outside their households (Knight, Longmire, Dave, Kim & David, 2007). Other studies rely on a more liberal time threshold, such as the Health and Retirement Study that originally used a 2 hour per week threshold to distinguish higher from lower intensity caregivers to older adults (Soldo & Hill, 1995). More typical are general screening questions, such as that which follows used in the American Association of Retired Person's (AARP) national study in 2004, which prompted respondents to self-identify as a caregiver:

> Do you currently provide or have you provided in the last year unpaid help to a relative or friend who has a disability or chronic disease? This kind of help includes assistance with health or personal needs or household chores. It might be taking care of finances, arranging for outside services, or visiting regularly to see how they are doing.

Identification of an upstream caregiver is typically made irrespective of living arrangements because most caregivers to older adults do not coreside with their care recipients (AARP, 2004). By contrast, grandparent caregivers are most often defined by their household arrangements. A grandparent caregiver is typically so designated when he or she coresides with a dependent grandchild in the absence of a parent. In some instances, grandparent caregivers include those with part-time responsibility for their grandchildren, either as a dominant or subordinate coguardian, or those who provide regular day care assistance to working parents.

Rarely are upstream and downstream caregiving considered together, yet there are parallels between these two types of caregiving that remain unexplored. In this review, caregiving to and by older adults is considered within the context of the life course perspective, specifically in terms of the importance of timing, context, and linked lives. Timing refers to the onset and duration of care and the demographic and historical conditions that give rise to caregiving and guide caregiving careers. Context refers to the cultural and socioeconomic environments that determine the meanings and resources attached to caregiving roles. Linked lives refer to familial structures and interdependencies that shape caregiving decisions and outcomes.

## CAREGIVING TO OLDER PERSONS

With the increase in life expectancy over the last century, informal caregiving to impaired older people has become increasingly common. Family members form the backbone of the support system of frail older adults who live in the community, with adult children serving most often as main care providers. Before focusing on intergenerational caregiving, it is important to mention other forms of informal caregiving that should not be overlooked. Spouses are among the most prolific caregivers to older adults. However, as age peers to their care recipients, spousal caregivers are vulnerable providers in terms of the relatively few psychological and physical resources they bring to the caregiving situation, the heavy burden they confront in performing the caregiving role, and their greater susceptibility to disease and disability (Pinquart & Sörensen, 2003). These very characteristics of spousal caregivers elevate the importance of adult children in the care portfolio of frail married elders. In addition, while about 10% of frail elders receive care from neighbors and friends, research indicates that nonkin have weaker commitment to caregiving when compared to adult children of the recipient (Barker, 2002).

The role of adult children in providing long-term support and care to their aging parents aroused much interest in social gerontology and family studies in the last quarter of the 20th century. Declines in mortality rates and longer periods of chronic illness in later life have increased older adults' need for prolonged periods of care, thus making caregiving to older parents a normative activity in the lives of adult children. Research shows that older parents expect to rely on their adult children for care, support, and attention when confronting old-age dependencies (Blieszner & Mancini, 1987). Christine Himes (1992) estimates that a majority of middle-aged women with a surviving parent can expect to provide parental caregiving at some point in their lives. In the future, caregiving will occur increasingly later in the lives of caregiving children and their parents. The notion of parent care as an unexpected responsibility now has more to do with the unanticipated duration of the care role than with its entry.

According to a 2004 study by the AARP and the National Alliance for Caregiving, 21% of the U.S.

population provided unpaid care to an adult. This percentage translates into 44.4 million caregivers in the United States, a figure that is certain to rise with the aging of the population. According to this study, the typical caregiver to an adult is a 46-year-old female with some college experience, providing 20 hours of care each week to her older mother. Three out of five caregivers are female, and almost half are employed full time. Slightly more than half of caregivers (55%) are providing care for a recipient living in another household. Although informal caregiving labor is unpaid, it represents a significant economic value to society. Estimates of the value of informal caregiving ranges between $196 and $257 billion annually—an amount greater than the costs of formal home care and nursing home care combined (Staton, Shuy, & Byock, 2001).

**The Stress and Coping Paradigm** The most widely used paradigm in caregiving research today is the general stress and coping model of caregiving (Lazarus & Folkman, 1984). In these models, the psychological and physiological well-being of caregivers are linked to their personal characteristics (e.g., health, gender, martial status, economic status, and race or ethnicity), appraisals of the caregiving situation (perceived burden), stress levels (perceived and physiological), external resources (social support, formal services), and coping styles (active, emotion-focused), as well as the demands placed on them by their care recipients' level of impairment. The deleterious consequences of stress and burden are well-documented. Caregivers are at elevated risk for depression, poor self-reported health, low functional capacity, stress-related diseases, cardiovascular reactivity, impaired immunological function, high blood pressure, and elevated cortisol levels. Several meta-analyses of caregiving studies found that caregivers to dementia patients had greater stress and worse physical and mental health than both noncaregivers and caregivers to nondemented recipients (Pinquart & Sörensen, 2003).

There is also strong evidence that coping skills and support resources produce beneficial effects and serve to ameliorate the impact of burden on negative outcomes. Some coping skills, such as reappraising the situation and creative problem-solving, appear to have a positive impact on the well-being of caregivers, whereas coping styles that deny the problem—also known as avoidant coping—may exacerbate the negative consequences of caregiving (Knight, Silverstein, McCallum, & Fox, 2000). Social support that provides emotional and practical assistance to the care provider also serves to reduce burden and its harmful effect on the well-being of caregivers.

One of the more perplexing paradoxes in caregiving research is the relatively low levels of subjectively perceived burden reported by African-American and Hispanic caregivers, despite providing more hours of care and confronting more objective stressors (Knight et al., 2000). Most explanations of this contradiction have centered on the strong cultural values of familism expressed in African-American families that elevate expectations for caregiving and lead to a more positive appraisal of the experience. Other explanations focus on the greater use of religious coping styles and more active informal support networks in African-American families (Aranda & Knight, 1997).

Less investigated are the positive aspects of caregiving. Although often demanding and challenging in time and effort, caregiving can enhance subjective well-being and produce uplifts in mood as an intrinsic reward for helping a loved one. Taking a life span approach to the topic of family elder care, Karen Roberto and Shannon Jarrott (2008) note the emerging literature on caregiver growth that demonstrates the positive aspects of caregiving, including improvement in problem-solving abilities, increased self-understanding, and a growing sense of competence. However, the assumption that caregiving distress is relieved following the death of the care recipient appears to be overstated. One study found that although former caregivers experienced decreases in stress and negative affect, their depressive symptoms and feelings of loneliness did not rebound 3 years after their caregiving activities ceased.

**Allocating Caregiving Roles in the Family** The literature on intergenerational caregiving and support is replete with evidence for structured differentiation of siblings in their parent care activities. Adult children in larger families tend to provide less support per child than those in smaller families (Wolf, Freedman, & Soldo, 1997), suggesting that siblings resolve their division of labor by offsetting each other's efforts in a coordinated response to their parent's needs. The division of labor in caregiving tends to favor children with less discretionary time. For instance, unmarried sons and daughters are more likely to help their frail older parents, and for longer periods of time, compared to their married counterparts.

Caregiving is increasingly viewed as a team effort, with multiple family (and nonfamily) members trading off their care efforts. Although the structure of caregiving is typically hierarchical with a main care provider who coordinates the efforts of subordinate caregivers, research indicates that there is a good degree of turnover in the composition of caregiver networks, as well as in the primary providers over time. In one national study, more than half the personnel of care networks—including more than one-fourth of primary caregivers—changed over a 2-year interval (Szinovacz & Davey, 2007). As dissatisfaction with caregiving appears to accelerate over

time (Walker, Acock, Bowman, & Fuzhong, 1996), the rotation of caregiving networks may help avoid caregiver burnout.

As of 2008, middle-aged children of aging parents—members of the baby boom cohort—have relatively many siblings with whom they can share care duties. However, the next generation of potential caregivers will have fewer siblings than baby boomers, further increasing doubt about the viability of family support to elders. Smaller family size may mean that fewer potential caregivers will be available to support older adults in need. In addition, there have been substantial changes in family structure since the late 1950s, most notably increasing divorce and remarriage rates, and the emergence of stepfamilies as a normative family form. The disruptive effects of divorce and the tenuous nature of stepfamily relations may weaken the responsibility that children feel for their older parents (Silverstein, Bengtson, & Lawton, 1997). Another point of view is that the effects of divorce, remarriage, and family blending may potentially expand the supply of kin available for supporting older family members, and partially compensate for the negative consequences of low fertility and family disruption. However, evidence suggests that caregiving is increasingly focusing on fewer providers. Through the decade of the 1990s, there was a 50% increase in the proportion of primary caregivers who had no secondary partner available to help shoulder the care load, a worrisome trend that may portend greater stress for caregivers and a weaker safety net for care recipients.

One of the most consistent findings in the elder care literature is that women provide more care than men. At the family level of analysis, the presence of daughters appears to suppress the contributions of sons, suggesting that siblings, when they are able, divide caregiving responsibilities along traditional gender lines. Even when sons provide care, they do so with less frequency and intensity. In a review of 223 caregiving studies, Martin Pinquart and Sylvia Sörensen (2006) found that female caregivers provided more hours of care and were more likely to provide personal assistance than male caregivers, and experienced greater burden and depression as a result. Perceived unfairness in the allocation of care duties among siblings may result in feelings of resentment and conflict, particularly if the inequality of effort falls along gender lines.

Scholars using a bargaining framework to better understand family decision-making with respect to parent care explicitly invoke the possibility of intersibling conflict. Adult children negotiate with each other when making decisions about caring for an aged parent based on their own preferences and the anticipation that their siblings will (or will not) provide care or take an aging parent into the household. In such a scenario, adult children may induce their siblings to provide care by bluffing their intention not to provide care.

Finding evidence of systemic familial consequences of caregiving requires examination beyond the caregivers themselves to other family members. Anna Amirkhanyan and Douglas Wolf (2006), for instance, found that noncaregiving sons and daughters of impaired older parents experienced higher rates of depression when compared to their counterparts whose parents were not impaired. Their findings suggest that filial distress in caregiving families may derive from noncaregiving sources, such as concern over unmet need of a frail parent, guilt over not fulfilling an expected role, or intersibling conflict over the allocation of caregiving duties.

**Work-caregiving Stress** One of the most difficult dilemmas facing caregivers who are also working outside the home is the need to balance their labor force participation with their caregiving duties. The number of caregivers who are working at least 30 hours per week has increased between the mid-1980s and mid-1990s, even as the total number of caregivers per recipient has declined (Spillman & Pezzin, 2000). Thus, working caregivers are increasingly common but have fewer colleagues with whom to divide the care load. Not surprisingly, caregivers who are working full time provide lower amounts of care than other caregivers; and while they are also more likely to use supplemental paid providers, their care recipients are at greater risk of having unmet needs (Scharlach, Gustavson, & Dal-Santo, 2007).

Research shows that employed caregivers are at higher risk of health-related problems than nonemployed caregivers. Competing work-family demands adversely affect the physical, mental, social, and economic well-being of workers, elevate their risk of alcohol abuse, and produce stressful home conditions (Bianchi, Casper, & King, 2005). Yet employment also provides income and other work-related benefits that may link the caregiver to ancillary support services, and affords access to coworkers who may serve as an informal support network that lessens the burden and strain associated with caregiving.

Evidence for increasing jeopardy among working caregivers is not gender-neutral. Suzanne Bianchi, Lynne Casper, and Rosalind King (2005) note that women continue to shoulder a disproportionate amount of caregiving even as their responsibilities in the labor market have increased. The continued tilt of caregiving toward adult daughters has raised concerns about the impact of caregiving on their careers. The large time commitment of caregiving appears to reduce working hours more among daughters than among sons, particularly in suppressing full-time employment. Gender imbalances in

care work may be viewed as the product of societal norms and social policies that favor men's participation in the labor force. Nations with welfare state regimes, such as Sweden, provide liberal home care benefits to its older citizens (as well as day care for young children), so that women have more equal access to employment.

**Caregiving and Multiple Family Roles** Discussion of the *sandwich generation* in past decades has centered on the challenges faced by working-age adults who simultaneously care for their parents and their dependent children. Brenda Spillman and Liliana Pezzin (2000) found that the number of sandwich generation caregivers has increased, estimating that approximately 3.5 million individuals were dually responsible for an aging parent and a dependent child. A Canadian study found that almost 3 in 10 of those aged 45 to 64 with unmarried children were also caring for an older relative (Raphael & Schlesinger, 1994), with a higher percentage obtained if care for grandchildren is also considered. While delayed fertility has increased the likelihood that middle-aged individuals will be sandwiched between elderly parents and dependent children, some researchers argue that child care and elder care still occur sequentially more often than they do simultaneously (Ward, Logan, & Spitze, 1992).

Because of increases in life expectancy, the sandwich generation increasingly consists of middle-aged individuals embedded within four-generation families. This generation may be responsible for frail older parents, young adult children experiencing economic and social challenges in the transition to adulthood, and grandchildren in need of care. Some research suggests that there are significant intrafamilial strains in families where adult children are dependent on middle-aged parents who are caring for the oldest generation (Hamill, 1994). However, other research finds few negative outcomes in this type of sandwiched family, with one study finding that living with an adult child relieves caregiving burden in midlife caregivers (Raphael & Schlesinger, 1994).

**Caregiving Norms over Time** Life span developmental theories concerning filial responsibility typically focus on psychosocial adjustments made by individuals to meet family demands at successive life course stages. With regard to parent care responsibility, Margaret Blenkner (1965) invoked the concept of *filial maturity* to describe the transition of adult children from being relatively autonomous from their parents to being dependable sources of support for them. This transition involves a change in perspective that allows middle-aged children to view their parents as vulnerable individuals, thereby strengthening their commitment to provide care in the context of an adult relationship. An alternative developmental framework for conceptualizing filial responsibility is based on caregiving anxiety (Cicirelli, 1988). In this framework, filial responsibility is induced when children worry about how they might successfully manage care duties in advance of the time that care is actually needed by their parents.

Cross-sectional studies have found little empirical evidence of midlife exceptionalism with regard to filial duty to older parents, and, to the contrary, describe a linear decline in elder care responsibility across successive age groups (Peek, Coward, Peek, & Lee, 1998). However, a longitudinal study by Daphna Gans and Merril Silverstein (2006) found that normative commitment to caregiving for older parents peaked in middle age and declined thereafter. Filial anxiety and filial maturity may be mutually reinforcing characteristics, as suggested by Mark Bromley's and Rosemary Blieszner's (1997) finding that adult children who worried about the future dependency needs of their parents also collaboratively discussed possible care options with them.

## CAREGIVING FOR GRANDCHILDREN

As of 2000, more than 2.4 million grandparents claimed primary responsibility for at least one coresident grandchild without a parent in the household, a figure that represents a nearly fourfold increase since 1970 (Simmons & Dye, 2003). Over the same period, the percentage of children living in grandparent-headed households not quite doubled, rising from 3% in 1970 to 5.5% in 1997 (Bryson & Casper, 1999). The number of grandchildren being raised by grandparents has increased in all socioeconomic and ethnic groups but rose most dramatically in African-American families of the inner city starting in the 1980s. When their families were hit particularly hard by the crack cocaine epidemic, HIV and AIDS, lack of employment, and incarceration, African-American grandmothers stepped in to raise their grandchildren in greater numbers, continuing a history of grandparent primacy going back several centuries. Custodial grandparents of all races and backgrounds, but particularly those from poor and minority background, subsequently emerged as an important social policy issue in the late 20th century.

**Well-being of Grandparent Caregivers** Grandparents raising grandchildren represent a high-risk group for illness and disease. They are predisposed to poor physical and mental health outcomes even before their care for a grandchild begins as a result of their generally low socioeconomic status and the difficult family circumstances that precipitated their involvement in care. Evidence also suggests that the high demand of grandchild care itself takes a toll on the physical and mental well-being of

custodial grandparents, particularly the challenge of meeting the needs of children who are facing physical, behavioral, and mental challenges of their own.

Research has shown that grandparents caring for grandchildren, both in skipped and three-generation households, are at elevated risk for many health problems (Minkler & Fuller-Thomson, 1999). Grandparent caregivers tend to have lower levels of functional health, more chronic conditions, greater risk of coronary heart disease, and less satisfaction with their health compared to noncaregiving grandparents. Physical health and mental health are interrelated such that poor physical health and psychological distress mutually influence each other. Thus it is not surprising that this stressed and distressed group of caregivers is at high risk for developing chronic impairments, acute conditions, and mental health problems.

Grandparents raising grandchildren are more likely to suffer from depressive symptoms than grandparents who are not raising their grandchildren. The degree to which elevated levels of distress are related to the caregiving role itself or to the existential social and family conditions that surround and give rise to this nontraditional family arrangement has not been addressed conclusively. The precipitating adverse conditions that triggered entry into the role are at least as stressful as the daily hassles and sacrifices that come with managing the role itself; indeed, they serve to reinforce each other, producing double (and higher order) jeopardies for grandparent caregivers. Pathways into caregiving that involved drug or alcohol abuse in the parental generation produce the most negative psychological outcomes in custodial grandparents, providing evidence of accumulated disadvantages in this group of grandparents over time (Goodman & Silverstein, 2002). The cluster of risk factors involving preexisting social and economic conditions is exacerbated by entry into the caregiving role.

Caring for grandchildren is associated with poor mental and physical outcomes partially because those engaged in this activity tend to have low income, be of minority status, and be unmarried. Grandparents who care full time for their grandchildren are more likely than noncaregivers to live below the poverty line, receive public assistance, and have less than a high school education (Minkler & Fuller-Thomson, 2005). Low socioeconomic status is consistently related to worse health in this population as a result of the disadvantages associated with poverty, such as lack of access to medical care and insufficient support resources. Unmarried grandparent caregivers have worse health than married caregivers for many of the same reasons.

Beyond economic factors, grandparent caregivers are particularly sensitive to their family and household environments. In coparenting situations, grandparents will have contact with their grandchild's parent(s), often to coordinate care or visits. In such instances, it is not unusual for conflict to emerge over child care decisions and childrearing strategies—particularly if the grandparent and parent are living in the same household. Research shows that custodial grandparents have better mental health when they are the sole caregiver and have autonomy in their caretaking role (Goodman, 2003). In such instances, conflict with the child's parent is minimized because parental authority sits squarely with the grandparent. Conversely, grandparent-parent conflict may be particularly acute when parents exert authority over their children, particularly parents who are involved in substance abuse or suffer from serious mental illness.

Grandparent caregiving often arises in response to parental exigencies, deficits, and crises that may have left grandchildren abused or neglected, further raising the challenges faced by custodial grandparents. Children in grandparent-headed households are at heightened risk of hyperactivity, school difficulties, emotional distress, and forming behavioral problems. Given that parenting can be extremely stressful even under optimal conditions, the mental health of grandparents raising grandchildren is of particular concern given their older age, their exposure to poverty, their greater chance of having special-needs grandchildren to supervise, and their (often) problematic adult children. Not surprisingly, grandparent caregivers exhibit even higher levels of stress than parental caregivers (Musil, Youngblut, Ahn, & Curry, 2002), and their parenting stress is associated with higher levels of depressive symptoms.

In a rare comparison of upstream and downstream caregivers, William Strawbridge, Margaret Wallhagen, Sarah Shema, and George Kaplan (1997) found in a longitudinal study (a study of a sample of individuals at multiple points in time) that while all types of caregivers had greater exposure to stress and confronted more social and economic problems than noncaregivers, grandparent caregivers expressed the most distress 20 years prior to caregiving. These results affirm a life course model of caregiver stress and disadvantage. Caregiving grandparents tend to derive from stressful family, economic, and community contexts that carry over into their caregiving lives.

Despite the challenges they face, caregiving grandparents are generally effective caretakers. Compared to day care, after-school programs, babysitters, nannies, and other formal sources of help, grandparents tend to have a less casual interest with the well-being of their grandchildren. Jennifer Solomon and Jonathan Marx (1999), for instance, found that the health and school adjustment of children raised solely by grandparents was nearly equivalent to children raised by one biological parent.

Research indicates that grandmothers who have been raising a grandchild for at least 2 years were more likely than noncaregiving grandmothers to seek preventive medical treatments; ostensibly, these caregivers were motivated to stay healthy for the sake of their grandchildren (Baker & Silverstein, in press).

While most grandparent caregivers are unquestionably committed to the well-being of the grandchildren in their charge, they often have ambivalent feelings about the disruptive effect their unexpected reengagement in the parent role has on their lives. Some caregiving grandparents report disappointment in having to inhibit their leisure activities or postpone their retirement plans. One grandparent summed it up as follows: "I thought this was the time in my life where I could just go off fishing for three days . . . I can't do it now" (Burton 1992, p. 749). Another grandparent said, "I just don't go places . . . it's just easier to stay home . . . that's just the way it has to be . . . this isn't good" (Jendrek 1993, p. 617).

Similar to the literature on caregiving to older adults, caring for grandchildren can enhance feelings of self-efficacy and a sense of satisfaction that comes from filling a valued family role. Engagement in caregiving has been found to provide numerous psychological benefits to grandparents that include the emotional reward of maintaining a strong affective attachment with the grandchild in their care, a renewed sense of purpose in life, and a second chance at parenting. When asked about the stresses and rewards of raising a grandchildren, four out of five caregiving grandparents found the experience extremely rewarding, and more than one-quarter reported that it was more rewarding than it was stressful (Giarrusso, Silverstein, Feng, & Marenco, 2000).

The cultural meaning attached to skipped-generation caregiving has a bearing on whether grandparent caregivers perceive their role as normative or extraordinary. Such meanings are informative regarding grandparents' legitimate claims to intervene on behalf of their grandchildren, and their eventual success in assuming the authority of a parent. Grandparents from cultures with strong expectations to care for at-risk grandchildren adapt more successfully to their custodial role. For example, a study comparing African-American, Latina, and White grandmothers raising their grandchildren found that African-American grandmothers had the best psychological outcomes once the reason for adopting the role was controlled. Better adaptation of African-American grandmothers was explained by a tradition of extended familism and reliance on surrogate caregivers going back to slavery (Goodman & Silverstein, 2002). African-American custodial grandmothers are also more apt to know others raising grandchildren and to have themselves been raised by grandparents, further legitimating this familiar family form.

The increased prevalence of four-generation families in which middle-aged persons have responsibilities to both their older parents and their grandchildren produces opportunities for the middle-aged or penultimate older generation to engage in multiple caregiving. Some research suggests that there are significant intrafamilial strains in families with both older and younger generations in need of care (Hamill, 1994), whereas other research finds few negative outcomes associated with multiple generation caregiving (Loomis & Booth, 1995). Whether additional roles occupied by caregiving grandparents induce or relieve stress has not been conclusively determined. However, one national study found that additional work and family responsibilities did not detract from the psychological well-being of custodial grandparents. In some instances these added roles reduced levels of depression, providing evidence that engaging in outside social spheres may link grandparents to social support, tangible resources, or social capital that could prove to be beneficial (Baker & Silverstein, in press). Research shows that supportive networks have palliative effects on the emotional well-being of caregiving grandparents by buffering the deleterious effects of caregiving stress.

**Part-time Grandparent Caregiving** A more liberal definition of grandparent caregiving includes those grandparents who provide child care in a secondary, supportive capacity. Women's labor force participation has provided grandparents expanded opportunities to care for grandchildren in dual earner and single-mother households. Mary Elizabeth Hughes, Linda Waite, Tracey LaPierre, and Ye Luo (2007) found that part-time caring for grandchildren is quite common in the United States, with 40% of grandparents providing at least 50 hours of care per year for the children of working parents. In the United Kingdom one in five children under 16 years old is looked after by their grandparents during the daytime (Clarke & Cairns, 2001), and a multinational European study found that 40-60% of grandparents reported taking care of grandchildren over a 1-year period (Attias-Donfut, Ogg, & Wolff, 2005).

While part-time caretakers of grandchildren face challenges, they are qualitatively distinct from grandparents who function as surrogate parents. Custodial grandparents are at risk for negative outcomes far in excess to those who provide part-time child care during the day. The evidence is mixed concerning whether providing part-time care to grandchildren is stressful to grandparents. In a national sample, Hughes and colleagues (2007) found that part-time caregiving produced few negative effects on grandparents. The authors are careful to point out that caregiving is just one of many roles that grandparents may occupy, suggesting that it is important to examine the combination of family and these other roles

when assessing the impact of caregiving on the well-being of grandparents.

**Caregiving for a Disabled Grandchild or Child** Providing care for a developmentally or physically disabled grandchild is among the most challenging roles taken on by grandparent caregivers. A review of literature suggests that while these heavily invested grandparents are greatly valued by their families, they are often limited in their capacity to meet the demands of emotionally or physcially challenged grandchildren (Mitchell, 2007). Research by Jennifer Park, Dennis Hogan, and Maryhelen D'Ottavi (2005) reveals that although grandparents are prolific providers of care for special-needs grandchildren, they sometimes face difficulties in bonding with these grandchildren, particularly those exhibiting communication and behavioral problems.

Chronic stressors associated with long-term caregiving interact with aging to produce elevated risk of physical and mental decline among continuing late-life caregivers. Older parents caring for adult children with mental or developmental disabilities report greater health problems due to arthritis, diabetes, heart disease, and depressive symptoms than older parents who were not caregivers (Magana & Smith, 2006). Evidence also shows that older parents who care for adult children with severe mental impairment experience greater economic distress and report lower marital satisfaction compared to their noncaregiving counterparts (Essex & Hong, 2005). Controlled studies of support groups for grandparents caring for grandchildren with developmental delays or disabilities have been shown to reduce depression in these caretakers (McCallion, Janicki, & Kolomer, 2004).

## POLICIES AND PROGRAMS FOR CAREGIVERS

The Family and Medical Leave Act (FMLA), the first U.S. national policy designed to assist working caregivers, mandates the broadest public benefits for family caregivers. The FMLA allows workers in businesses consisting of 50 or more employees to take up to 12 weeks of unpaid leave to care for an ill family member or newborn child; 35 million Americans have taken leave under this law since 1993 (AARP, 2004). Some states have strengthened this coverage by mandating salary replacement rates. Publicly-funded services are also available for family caregivers. In October 2000 Congress established the National Family Caregiver Support Program (NFCSP) to provide support services for family members caring for persons with disabilities and grandparents caring for grandchildren.

According to the Adoption Assistance and Child Welfare Act of 1980, privileged grandparents are now custodians of first choice in the event that parents are not capable guardians of their children; in addition, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 has allowed public assistance (i.e., grants from the Temporary Assistance for Needy Families [TANF] program) for relative caregivers, even if the caregiver has not adopted the child. Public programs supporting grandparents raising grandchildren are mostly found at the local level. The Departments of Children and Family Services (DCFS) provides formal services such as respite care, public assistance, and legal advice to caregiving grandparents.

However, outside the DCFS foster care system, very few services are specifically targeted at the grandparent caregiver population, as many public benefits depend on whether the grandparent has legal custody of the grandchild. Grandparents who are otherwise eligible to collect public assistance based on their own income do not qualify for full payments for grandchildren if their own children are already covered as eligible dependents. In addition, grandparents raising grandchildren have reported much difficulty obtaining health insurance for their grandchildren; without legal custody, grandparents are usually not able to cover custodial grandchildren under their work-based health insurance. Given that grandparent-headed households are often overcrowded, it is encouraging that special housing specifically designed for grandparents and grandchildren are sprouting up in cities across America, even if there is far more demand than supply as of 2008 (Baker, Silverstein, & Putney, in press).

Programs supporting all types of caregivers include formal therapy sessions, peer-to-peer counseling, and formally organized support groups. Many programs are supported by state and municipal initiatives. Caregivers are taught practical coping skills and relaxation techniques to relieve their stress and are provided with practical information to direct them to appropriate services that could be useful for them. In a meta-analysis of 127 intervention studies with dementia caregivers, Pinquart and Sörensen (2006) found that the best treatments were those therapies and supports that required the most active participation of the caregiver. Informal support groups can be found in all areas of the country, including virtual communities. (Virtual communities are groups of people who interact via letters, telephone, and e-mail for various purposes, rather than face to face.)

Compared to other developed nations, public policy in the United States is not particularly generous with regard to providing relief for long-term chronic caregivers. Because most caregivers are employed, workplace policies and characteristics are arguably more directly important for enhancing the care and support of dependent family members. Several studies have found that positive workplace characteristics—including increased

flexibility in the time and place work occurs, supportive supervisors, and a family-friendly work culture—are associated with fewer work-family conflicts and better health of caregivers and their families.

**SEE ALSO** Volume 1: *Grandchildren;* Volume 3: *Grandparenthood; Intergenerational Transfers; Parent-Child Relationships, Later Life; Policy, Later Life Well-Being; Sibling Relationships, Later Life; Singlehood; Stress; Widowhood.*

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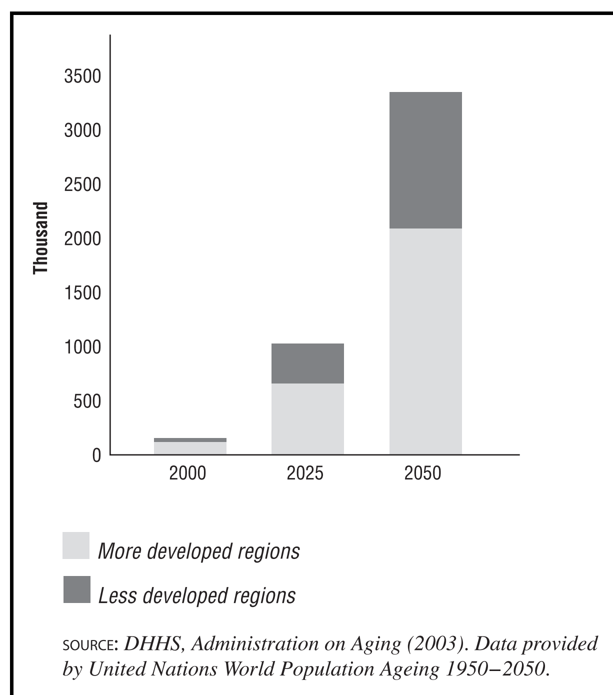
***Merril Silverstein***

# CENTENARIANS

Centenarians, persons who have reached the age of 100 years or more, are publicly recognized and honored across cultures. Media accounts of a 120-year-old woman bicycling for exercise, a 100-year-old woman and a 101-year-old man in the United Kingdom becoming the oldest married couple in their country, and centenarian veterans of major wars are inspirational, because centenarians symbolize triumph over frailties of the human body and spirit. What are the secrets to their longevity? What can scientists learn from them about the maintenance of physical and psychosocial health? Do centenarians have helpful tips from their life experience that the rest of us could easily adopt? And, perhaps the question most wondered about, does their quality of life make their longevity fulfilling?

## PATTERNS AND TRENDS IN THE CENTENARIAN POPULATION

Approximately one person in 10,000 living in developed countries of the world attains the age of 100. Women are more likely than men to be centenarians. Among centenarians worldwide, the ratio of women to men is about 5:1. James Vaupel (2000) has estimated that half of all girls born in the developed world in the early 21st century will live to age 100.




SOURCE: *DHHS, Administration on Aging (2003). Data provided by United Nations World Population Ageing 1950–2050.*

***Figure 1.*** *Distribution of world centenarians by development region, 2000–2050.* CENGAGE LEARNING, GALE.

Persons who attain the age of 110 or older are termed *supercentenarians*. Approximately 90% of supercentenarians are women, according to L. Stephen Coles (2004). The oldest known surviving person was Jeanne Calment of France, who died in 1997 at age 122. The oldest proven age for a male, 115, is attributed to Christien Mortensen, a Danish-born American who died in 1998. The Japanese island of Tokunoshima claims to have produced the oldest man, Shigechiyo Izumi, who reportedly died in 1986 at the age of 120, but he more likely had inherited the name of an older deceased sibling and was actually 105 when he died.

In 1900 only one in 100,000 Americans was a centenarian, compared to one in 8,000 to 10,000 Americans as of 2000 (Perls & Silver, 1999). In the United States, growth in the centenarian population since 1990 and continuing to 2010 is estimated at about 4% per year. The United Nations has projected that the number of centenarians worldwide will increase about 18-fold between the years 2000 to 2050. Although about two-thirds of this increase will occur in developed countries, an increasing portion will occur in regions that are currently less developed (see Figure 1).

Although marked growth in the number of centenarians is a new phenomenon, human survival approaching 100 years is not. In the 16th century the Italian painter Titian lived to be at least age 90 and may have reached age 99. Several accounts of the life of the ancient philosopher Democritus maintain that he lived more than 100 years, perhaps reaching age 109, and other Greek philosophers are also thought to have lived beyond the age of 90. Thus, it is not the maximum life span obtainable that has changed; what has changed dramatically since 1900 is the number of people who are able to achieve their life expectancy potential.

## PROBLEMS OF AGE MISREPORTING

Several geographic areas (e.g., the Russian Caucasus area and Vilacamba, Ecuador) have claimed to have persons with extreme longevity, but the claims were subsequently found to be exaggerated. Validating the age reported by or on behalf of centenarians and supercentenarians is important in studies of the oldest old (Coles, 2004; Perls, Bochen, Freeman, Alpert, & Silver, 1999). Age exaggeration, rather than minimization, is the primary concern.

Some of the factors contributing to error in centenarian reporting include a tendency among young people to cite an older age at the time of immigration in order to qualify for work, poor record-keeping and updating of vital statistics in some locales, and loss or destruction of birth records. The only recording of birth for some persons born at home in rural areas may consist of a baptismal certificate or a birthdate entered in a family Bible, a pattern especially likely to characterize African American persons born in the southern United States.

## CROSS-NATIONAL COMPARISONS OF CENTENARIANS

As of 2008 the United States had the largest total number of centenarians—more than 55,000 (Hall, 2008)—followed by Japan, China, and England-Wales. The higher number of American centenarians in part reflects the large U.S. population in 1890–1905 compared to other countries with a large number of centenarians. Although the United States reports a larger number of centenarians than does Japan, Japan has a higher ratio of centenarians to the overall population than does the United States. Similarly, China reports a larger number of centenarians than does England-Wales, but England-Wales has a higher ratio of centenarians to the overall population than does China.

Areas characterized by geographic clustering of persons who have reached advanced ages are of particular interest, suggesting that people in those areas share environmental influences and/or genes that enable them to reach extreme ages. A concentration of octogenarian and nonagenarian men living in the Tibetan mountains herd livestock and lead physically strenuous lives. Five times as many people living on the island of Okinawa as

compared to people living in the rest of Japan live to be 100. A *centenarian belt* in North America extending from Minnesota to Nova Scotia may reflect ethnic backgrounds (e.g., Celtic, French/Acadian, and Scotch) that genetically predispose people to extreme longevity. In areas with geographic clustering of centenarians, the sex ratio becomes more equal, suggesting a shared gene pool. For example, in Sardinia, which has an increased prevalence of centenarians, the ratio of women to men centenarians is only 2:1 (MacKnight, 2007).

## UNIQUE CHARACTERISTICS OF EXCEPTIONALLY LONG-LIVED INDIVIDUALS

Centenarians may share genetic factors that facilitate achieving exceptional old age. Jeremiah A. Barondess (2008) noted that more than half of centenarians have first-degree relatives or grandparents who also reached very old ages. Supercentenarians typically have long-lived siblings (Coles, 2004). After age 80 it is likely that genetics play an increasingly important role in determining survival to an advanced age.

Morbidity profiles, which may be genetically based, suggest that centenarians can be broadly classified as *survivors*, *delayers*, and *escapers*, based on their experience with major age-associated disease states such as hypertension, cancer, and dementia. Persons categorized as survivors have an age of onset of less than 80 years for at least one of the major disease states; delayers' age of onset is between ages 80 and 100; and escapers' age of onset is 100 years or not at all (Evert, Lawler, Bogan, & Perls, 2003). Centenarians are more likely to lack variations of *disease genes* that increase the likelihood of developing particular diseases. Compared with other older persons, centenarians seem to markedly delay or escape life-threatening diseases such as cancer and Alzheimer's disease (Hitt, Young-Xu, Silver, & Perls, 1999). A variation of a gene known for its association with Alzheimer's disease becomes markedly less frequent with advancing age (Frisoni, Louhija, Geroldi, & Trabucchi, 2001) as do some genes that are prominent in cardiovascular disease. Centenarians may also have genes that lower their risk for health problems, such as genes that result in a favorable cholesterol profile. *Longevity enabling genes*, which affect rate of aging, are also hypothesized, although not yet identified. Finally, centenarians may be better able to resist the effects of bad genes, avoiding the inflammatory response that characterizes many chronic conditions.

An estimated 30% of centenarians have physical and mental impairments. The remainder function remarkably well, with about 40% having some vision, hearing, or mobility impairment only and 30% showing very few signs of physical or mental impairment. Thus, generally good health characterizes the majority of centenarians, and they have lived most of their lives in good health, experiencing a fairly rapid decline only near the end of their lives (Hitt et al., 1999). Damage to the immune system may lead to an infection that leads to death, or coronary artery disease may worsen and trigger a heart attack.

Do commonalities exist in the lifestyle of centenarians that are evidenced in health behaviors, social connectedness, and reactions to stress? It has been observed that centenarians are rarely obese and that they exercise and eat healthful foods. Substantial smoking rarely characterizes centenarians, although as many as half of centenarians report enjoying alcoholic beverages on a regular basis. Centenarians vary widely in educational and socioeconomic background, religion, and ethnicity, but most describe having close ties with friends and family. Belle Boone Beard (1991), who interviewed 600 centenarians over a 40-year research career, noted that romance should be considered among the possible so-called secrets of longevity.

Mental health characteristics that have been frequently noted among centenarians include a serene or affirmative outlook on life and the capacity to accept what cannot be changed, such as loss of a spouse. Centenarians demonstrate adaptability to age-related losses and may be individuals who are inherently capable throughout life of progressively adjusting their life styles and accepting their conditions (Dello Buono, Urciuoli, & DeLeo, 1998). Centenarians have been described as *stress-shedders*. They also demonstrate a willingness to assert themselves and their individuality (Beard, 1991). Some have been known to laughingly attribute their longevity to having told themselves that they would live to be 100.

Despite diverse social backgrounds and interests and a vast mosaic of life experiences, centenarians for the most part are individuals who have maximized the portion of their lives spent in good health and independent functioning, and they are content. Compressing the onset and duration of illnesses toward the end of life is a widely shared goal. Centenarians in many ways represent the gold standard for aging well (Perls & Silver, 1999), and there is understandably great interest in identifying the genetic and environmental factors that facilitate the model of aging that centenarians provide.

The discovery of genetic variations associated with survival to extreme old age is a promising route toward understanding cellular and biochemical mechanisms of the aging process and susceptibility to age-related diseases. Studies of centenarian populations in North America, Asia, and Europe increasingly point to clusters of clinical characteristics associated with exceptional

longevity that in turn generate genetic investigation. Researchers are also focusing on the significance of non-genetic determinants of long life that are modifiable, including smoking, obesity, and sedentary life style. Registries such as the New England Centenarian Study and the George Centenarian Study facilitate investigation of adaptive mechanisms and functional reserves evident among centenarian survivors. Collectively, centenarian studies not only stimulate the search for new knowledge of the human genome but also have broad potential to improve understanding of how to minimize disability and maximize quality of life in the context of aging.

**SEE ALSO** Volume 1: *Age Norms;* Volume 3: *Active Life Expectancy; Disability and Functional Limitation, Later Life; Frailty and Robustness; Genetic Influences, Later Life; Life Expectancy; Mortality; Oldest Old; Population Aging.*

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***Nancy Kutner***

## CHILDLESSNESS

**SEE** Volume 2: *Childlessness.*

## CHRONIC ILLNESS, ADULTHOOD AND LATER LIFE

A chronic illness is any health condition that results in sickness or activity limitations that last longer than 3 months. In contrast to acute illnesses, chronic conditions often do not have a distinct onset or a single underlying cause. These conditions can have a global impact on a person's life, with social, psychological, and economic consequences. According to the National Center for Health Statistics (2008), the most common chronic illnesses among older adults in the early 21st century are arthritis, diabetes, cancer, heart disease, and respiratory diseases. Chronic illness claims nearly 7 of 10 lives and account, for more than 75% of annual health care costs in the United States.

### DEFINITION

Chronic illness is a broad category that covers a class of diseases with many different causes and patterns of progression. However, these chronic conditions have two commonalities: They are typically not curable, and they are often degenerative, leading to greater limitations in mental and physical function over time. Thus, the goals of medical care typically are to maintain current levels of function; manage the symptoms of the chronic condition, such as pain; and prevent secondary complications (e.g., pneumonia in persons with chronic obstructive pulmonary disease).

### INCIDENCE AND PREVALENCE

The extension of the human life span in developed nations during the 20th century led to a dramatic shift, and chronic illnesses have become the leading causes of death. Medical advances as well as improvements in living conditions (e.g., sanitation) and nutrition have nearly eradicated infectious diseases as primary causes of death at all ages. More persons survive to adulthood and even into the

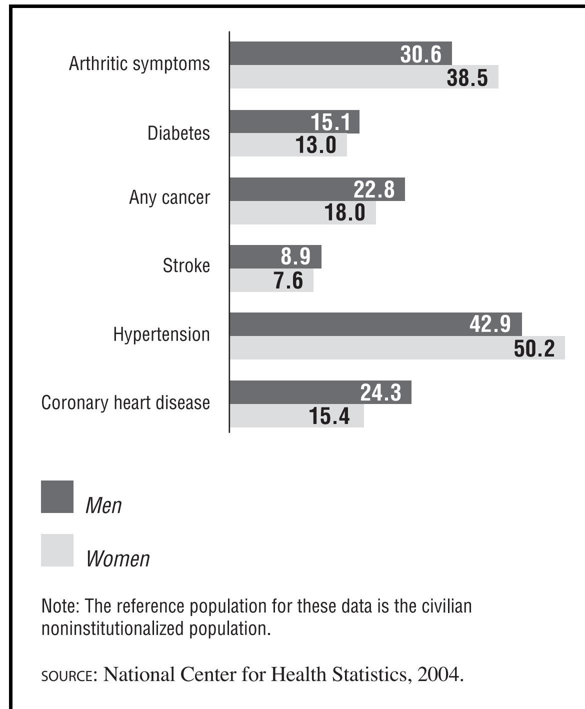


***Figure 1.*** *Prevalence of selected chronic conditions in people aged 65 and over by sex (by percent), 1999–2000.* CENGAGE LEARNING, GALE.

oldest ages than at any other point in history. Five of the six most common causes of death in the United States are chronic illnesses. In 2005 diseases of the heart (27%), cancer (23%), cerebrovascular conditions (6%), respiratory diseases (5%), and diabetes (3%) accounted for 64% of deaths among adults of all ages in the United States.

Considering the population as a whole, nearly 45% of Americans have at least one chronic illness, but there are distinctive patterns of prevalence across age groups. Because the risk of developing most of these conditions accumulates over time, there is a higher concentration of chronic conditions among older adults. 84% of adults age 65 or older report having one or more chronic illnesses. Among people ages 20 to 44, 38% report having at least one chronic condition. Mortality risk from chronic illness peaks from ages 65 to 74, accounting for more than 77% of all deaths in this age group. Although the incidence of chronic illness declines with age, the higher prevalence of these conditions among people of the oldest ages leads to a greater probability of comorbidity and functional limitations. Older Americans are also likely to have chronic conditions that are more disabling, such as arthritis and heart disease. At younger ages, the most prevalent chronic conditions are hypertension and respiratory diseases (asthma and chronic bronchitis).

## CHRONIC ILLNESS OVER THE LIFE COURSE

Even though chronic illness tends to be concentrated among older adults and has a greater influence on functional health in people of advanced age, it is critical to examine chronic illness from a life course perspective. Risk of developing chronic conditions accumulates over a lifetime, influenced by life style factors such as excess body weight, lack of physical activity, poor diet, and tobacco use. These modifiable factors can yield greater gains in long-term health when improved at younger ages. If behavioral interventions and screening are targeted only at older adults, it is likely that there will be only modest gains in the prevention and delay of onset of chronic illnesses.

Over the past decades medical screening procedures have become more specific and sensitive, making it possible to detect chronic diseases at the earliest stages. Early detection can allow early intervention and, for some conditions, treatment. This can have substantial health benefits for individuals, including less disability, a decreased likelihood of secondary complications, and perhaps a slower onset of a condition. Early detection also has increased survivorship, particularly for conditions such as cancer.

Even though a higher proportion of older adults have a chronic illness, the absolute number of persons with chronic conditions is greater among working-age adults. In 2000, 29 million Americans age 65 years and older had one or more chronic conditions, compared to more than 75 million who were age 20 to 64 years. These younger adults are aging with chronic illnesses, which may have significant impact on their social, economic, and mental well-being. Managing a chronic illness can be difficult for working-age adults because many are still employed, raising families, and even perhaps caring for elderly relatives. This directly influences worker productivity, decisions to exit the labor force, ability to fulfill social and familial roles, and long-term functional health. Examining the chronic illness experience from a life course perspective will help researchers and policy makers understand the social, economic, and medical consequences of these conditions not just at advanced ages but over the entire lifetime.

## RISK FACTORS

Although each chronic disease has its own etiology and constellation of risk factors, certain key health behaviors have been linked to nearly every chronic disease: tobacco use, diet, and exercise. According to the Centers for Disease Control, nearly 20% of all premature deaths are due to tobacco use. About 14% of those deaths are caused by a poor diet and lack of exercise. Many of these

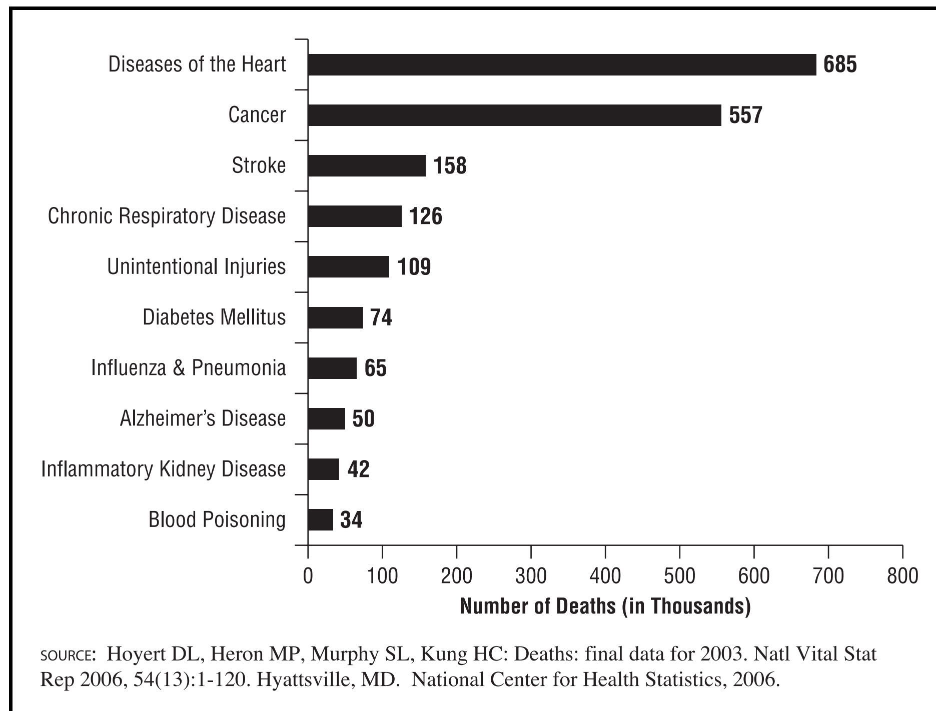


***Figure 2.*** *Leading causes of death in the United States, 2003.* CENGAGE LEARNING, GALE.

risk factors tend to cluster together, so that those who smoke also are more likely to be overweight and have a sedentary life style. Further, these behavioral risk factors can interact with environmental exposures and genetic predispositions to affect the likelihood of developing a chronic condition, the rate of onset, and disease progression over time. The additive and perhaps multiplicative effects of these combined risk factors on the development of chronic illnesses have not been explored sufficiently.

In the last decade of the 20th century and the first decade of the 21st, there were dramatic shifts in mortality risk for specific chronic illnesses among adults age 65 and older. Mortality from diabetes and its complications increased 43% among adults in those two decades. Deaths from chronic lower respiratory diseases increased 62% in the same period (from 185.8 to 300.7 per 100,000 deaths). Largely as a result of advances in lifesaving medical treatments, mortality from diseases of the heart and stroke decreased about 35% in those two decades. Deaths from cancer did not change significantly over that period. Heart diseases remain the primary cause of death for older adults.

Disease etiology and long-term consequences for health and functioning vary substantially with the type of chronic condition. For example, more than 60% of adults age 65 and older have one or more types of arthritis. It is the most prevalent chronic illness and the leading cause of disability in older adults. Although arthritis can be disabling, mortality risk is low. Congestive heart failure, in contrast, affects only 6 to 10% of adults age 65 or older, but the mortality risk is very high. About 40% of those with congestive heart failure die within the first year. This occurs because congestive heart failure is a secondary condition caused by complications from other chronic illnesses, most commonly coronary artery disease, hypertension, and/or diabetes. Type 2 (adult-onset) diabetes accounts for about 90% of diabetes prevalence and generally develops in adults over age 40 as a result of accumulated risk associated with chronic obesity and lack of physical activity. The prevalence rate of diabetes increased rapidly in the last decade of the 20th century and the first decade of the 21st, largely because of growing rates of obesity and sedentary life styles among Americans.

## IMPACT AND CONSEQUENCES

The long-term impact of chronic illness is influenced directly by the nature of the disease, the timing of onset, the rate of progression, and effective management of symptoms. Some conditions can lead to a rapid functional decline, whereas others may take years before impairing one's ability to perform activities. Similarly, some chronic illnesses may affect only a few domains, but others may have a more global impact. Nearly 81.8

million Americans have at least one chronic condition but do not report limitation in any life domains. About 43.2 million Americans have a disability as a result of a chronic condition.

The use of health services is substantially higher among adults with chronic illnesses. Chronic medical care accounts for 72% of physician visits, 76% of hospital admissions, 80% of total hospital days, 88% of prescriptions, and 96% of home care visits. Adults with one or more chronic conditions see a physician on average 7.4 times per year, whereas those without chronic conditions have an average of 1.7 physician visits annually. The use of health services increases substantially with each additional chronic condition.

The social consequences of chronic illness can be as life limiting as mental and physical impairment. Symptoms of the chronic illness, particularly pain, fatigue, and mobility limitations, can hinder participation in social activities. Driving cessation is associated with a rapid decrease in social activities, although this decrease is mediated by marital status and the proximity of grown children. The loss of social roles can accumulate over time as a chronic condition progresses, leading to social isolation, depression, and loneliness.

## MANAGEMENT

Because chronic illnesses are long term and can be degenerative or functionally limiting, individuals must engage in active management of their conditions. Effective disease management can include medications or medical treatments, the use of assistive devices, and healthy behaviors such as exercise. The concept of disease management is associated solely with chronic illness. Unlike the goal of acute medical care, which is to heal or cure the patient, chronic medical care focuses on helping the patient manage the symptoms, maintain independence, and prevent secondary complications. It is a long-term investment to prevent further functional decline and requires a partnership between the patient and the physician (often multiple physicians) as well as permanent life style changes.

Adults with a chronic illness play a crucial role in managing their conditions. They must monitor their symptoms, disease progression, the effectiveness of medication, and the onset of secondary complications. Patient reports of changes or stability in their conditions help the medical team determine the course of treatment. Adults with a chronic illness therefore must be critical consumers of medical care and advocate for treatment or screening that will help maintain their long-term health. Barriers to getting necessary care include the prohibitive cost of care and a lack of assistance in coordinating needed services.

## DEMOGRAPHIC FACTORS

Chronic illness prevalence and the associated risk factors tend to be concentrated among certain demographic groups. Effective interventions to prevent and/or delay chronic illness must address the distinctive risk profiles across gender, race, and ethnic groups and levels of socioeconomic status. Overall, chronic conditions disproportionately affect the poor and racial and ethnic minorities primarily because of a lack of access to preventive health care services and a higher likelihood of having risk factors associated with chronic illness.

For example, non-Hispanic Blacks and Hispanic Americans have the highest proportion of sedentary life styles; 30.3 and 33.3%, respectively, were found not to have participated in any physical activity in the previous month. Among all racial and ethnic groups, Black Americans have the lowest percentage of adults with a body mass index in the normal range (27.7%). There are socioeconomic differences in risk factors as well. Thirty-two percent of persons earning less than $15,000 per year currently smoke, more than double the percentage (14.7%) among those earning more than $50,000 per year. Nearly 40% of adults age 18 to 64 who earn less than $15,000 per year are uninsured, limiting their access to preventive medical care and early disease screening at a time in the life course when intervention can be the most effective.

The number and type of chronic illnesses in the population also have distinctive patterns. Among males, heart disease is one of the five most common chronic conditions in those age 45 years and older; among females it is in the top five only at the oldest ages (75 and older). However, women are substantially more likely than men to have arthritis and report more days in pain. Those with higher incomes are less likely to have multiple chronic conditions than are those with lower incomes. Specific conditions are likely to be concentrated in lower socioeconomic groups as well. Asthma rates are nearly double (13.7) for those earning less than $15,000 per year relative to those earning more than $50,000 per year (7.1). The rate of diabetes is nearly triple among those who have less than a high school education (14.2) compared with those who have a college degree or higher (5.4).

The prevention and treatment of chronic illness require a life course perspective of health and healthy behaviors. Early intervention and screening, particularly among high-risk groups, would reduce both the incidence and the prevalence of chronic illness substantially as well as improve functional outcomes. Although many people live with chronic illness for decades, delaying onset, slowing progression, and preventing secondary conditions would extend life and improve the quality of life at all ages.

**SEE ALSO** Volume 3: *Active Life Expectancy; Arthritis; Cancer, Adulthood and Later Life; Cardiovascular*

*Disease; Death and Dying; Diabetes, Adulthood and Later Life; Disability and Functional Limitation, Later Life; Epidemiologic Transition; Health Behaviors, Later Life; Health Care Use, Later Life; Health Differentials/Disparities, Later Life; Older Drivers; Pain, Acute and Chronic.*

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*Jessica Kelley-Moore*

# CIVIC ENGAGEMENT, LATER LIFE

**SEE** Volume 3: *Political Behavior and Orientations, Later Life; Time Use, Later Life; Volunteering, Later Life.*

# COGNITIVE FUNCTIONING AND DECLINE

Cognitive skills and abilities, such as reasoning, memory, and problem solving, form the foundation for everyday functioning throughout the life span. Cognitive skills are needed to perform activities of daily living, including tasks such as taking medication, procuring meals, and managing finances. Cognitive ability takes on added importance during later life as selective, typical age-related changes occur. In older adulthood, cognitive abilities are essential to additional important health outcomes, including service utilization, mental health, and mortality. Contrary to aging stereotypes, when considering cognitive functioning in adulthood and later life it is important to keep in mind that (a) as a group, older adults' range of functioning and performance tends to be more heterogeneous than that of younger adults; (b) cognitive changes such as dementia are considered "nonnormative" or atypical and do not constitute the majority of cases; and (c) cognitive prevention, enhancement, and intervention efforts are beneficial. Consistent with sociological and psychological perspectives, individual differences as well as ethnicity, socioeconomic status, gender, cohort, and culture are key to understanding cognitive functioning during adulthood and aging.

## PATTERNS OF COGNITIVE FUNCTIONING ACROSS ADULTHOOD AND LATER LIFE

Investigation and assessment of cognitive functioning in adulthood and later life has typically followed three approaches: (a) a psychometric approach aimed at understanding fundamental cognitive abilities and normative aging; (b) examination of higher order skills needed to function within an individual's day-to-day context; and (c) a clinical or neuropsychological approach, which focuses on mechanisms and outcomes of nonnormative cognitive aging such as occurrence of dementia. From the psychometric perspective, normative age-related changes in cognition are well documented, demonstrating that selected abilities decline with age. Consistent trajectories over time of individual cognitive abilities have been described across samples and cohorts. This body of work also indicates that differential change is evident across various types of cognitive abilities and that abilities need to be considered separately (Christensen, 2001).

Cognitive research typically differentiates two broad classes of cognitive abilities, each composed of several individual skills, and this distinction remains important through very late life. Cognitive abilities that rely on accumulated knowledge and experience, and are highly dependent on an individual's culture, have been described as *crystallized intelligence* (Schaie, 2005). A prime example of such ability is verbal comprehension. In contrast, intellectual skills that are considered more "innate" and biologically driven have been labeled *fluid abilities* (Schaie, 2005). Often fluid abilities focus on the ability to deal with novel situations. One such ability is working memory, in which mental information is manipulated before a response is formulated or information is committed to long-term memory (e.g., backward recital of a presented digit span). Inductive reasoning is another example of a fluid ability, in which individual stimuli are used to decipher a larger pattern (e.g., deciding which letter comes next in a presented series of letters). Crystallized abilities tend to remain stable well into later life, whereas fluid abilities peak in young adulthood (Schaie,

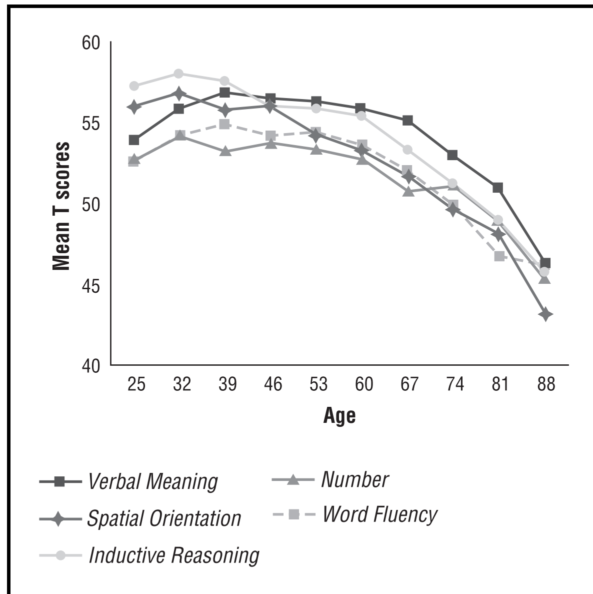


***Figure 1.*** *Estimated age changes from 35-year data for the primary mental abilities.* CENGAGE LEARNING, GALE.

2005). Decreased processing speed (Salthouse, 2000), memory (Christensen, 2001), and attentiveness and inhibition of distracting stimuli/information (e.g., Zacks & Hasher, 1994) in later adulthood have also been observed.

In addition to documenting normative age-related declines, empirical studies have identified two additional developmental phenomena related to cognitive aging. First is the tendency for older adults to demonstrate accelerated cognitive decline close to death. Prior to natural death, some older adults exhibit terminal change (within 3 to 5 years of death) and a drop (within 1 year of death) in their cognitive performance (Bosworth & Siegler, 2002). Second, the very nature and structure of cognitive abilities appears to change throughout older adulthood. Findings suggest that individual cognitive abilities such as memory and verbal knowledge become less differentiated and more similar with increasing age (e.g., deFrias, Lövdén, Lindenberger, & Nilsson, 2007).

Another line of research within the cognitive aging field examines the everyday cognitive and problem-solving skills needed to traverse daily life. In contrast to more narrowly defined individual cognitive skills, problem-solving ability is considered a higher order cognitive skill that depends on the constituent intellectual abilities (Marsiske & Willis, 1995). Within the psychometric approach, there is a reliance on paper-and-pencil measures that are akin to academic tests. However, assessments of problem-solving ability are more contextual and tend to incorporate actual real-life stimuli (e.g., prescription label, transportation schedule). In addition, these assessments are more likely to be experiential and extend beyond paper-and-pencil assessment. For example, participants might be asked to look up a phone number in a telephone book or count out exact change from a lunch bill (e.g., Diehl, Willis, & Schaie, 1995).

Within the cognitive aging literature, everyday problem-solving research has gained momentum as proponents point to the "value added" by using such an approach (see Marsiske & Margrett, 2006). A central issue remains regarding everyday problem solving, namely its relation to everyday functioning and, in part, the difficulty identifying an appropriate standard consistent with actual daily demands by which success can be determined (Marsiske & Margrett, 2006). However, by focusing on what older adults actually do in their day-to-day lives, the primary benefit of examining everyday problem solving is increased ecological validity or relevance, meaning outside of an artificial testing situation. Using this approach, researchers can better approximate how older adults perform in their own real-life settings. These efforts may lead to increased efficiency of assessment using a more concise battery as well as increased participation by older adults and greater self-efficacy when performing the tasks (Marsiske & Margrett, 2006). Additional empirical and theoretical work is needed to explore the nature of everyday problem-solving skills in very late life.

A third approach to understanding cognitive aging stems from a more clinical and neuropsychological perspective aimed at understanding the mechanisms underlying nonnormative cognitive changes such as the occurrence of dementia. From this perspective, global indicators of cognitive functioning and neuropsychological measures are typically employed. For example, a widely used assessment to gauge general cognitive status and distinguish individuals with dementia from those without is the Mini-Mental Status Exam (Folstein, Folstein, & McHugh, 1975). This assessment comprises 11 items that assess orientation to time and place, comprehension and recall of familiar objects, attention and calculation, and language. The maximum score on the Mini-Mental Status Exam is 30, and typically a score of 23 or lower is considered an indication of impairment.

## MEMORY OVERVIEW

Although working memory is often considered an element of fluid abilities, investigation of memory has garnered added attention as this cognitive ability provides a coordinating foundation for higher order cognitive operations with numerous implications for daily functioning. Notably, memory deficiency is linked to mild cognitive impairment and dementia.

Various models have been proposed to describe memory processes. One of the most pervasive models has been the information processing or modal model, which likens memory processes to computer-system processing with input and output. This model focuses on three types of memory: sensory, short-term, and long-term memory (Baddeley, 2007). These three memory constituents vary in capacity and duration. Sensory memory involves very brief retention of sensory input that is either selectively encoded or forgotten. Short-term or working memory involves discrete (limited) tasks such as remembering a telephone number while finding the telephone and waiting to dial. Long-term memory involves more detailed information stored for indefinite periods.

In the process of remembering, people are assumed to engage in three steps. The first step is encoding, in which meaning is ascribed to incoming information. Second, information may then be moved into storage. Third, information may be retrieved via two methods, recognition or recall. Recognition is the easier of the two methods and is conceptually similar to a multiple-choice test. The respondent is presented with several options and asked to identify (remember) which element is the correct answer.

In contrast, recall of information is comparable to an open-ended essay item in which possible responses are not presented. The task is more difficult because respondents must generate (remember) the correct answer. Information may be lost at any stage. For example, the vast majority of received sensory information is not encoded and therefore is not moved into short-term memory. The multicomponent model extends the modal model, particularly in regard to short-term memory and inclusion of an episodic buffer (Baddeley, 2007). In this model, short-term memory is considered very much to be "working," active memory and is distinguished by an attentional (executive) control system with two secondary storage systems that rely on acoustic (auditory) and visuospatial (visual, graphic) representations and processes (Baddeley, 2007). As is discussed later, a link between sensory functioning and processing and cognition is prevalent across differing theories and studies.

As outlined by Bäckman, Small, and Wahlin (2001), long-term memory can be generally classified as episodic (i.e., specific and personal to an individual; memory for events) or nonepisodic (i.e., information related to more general learning and skill building). Age-related differences are evident in storage and retrieval processes across memory type. Generally for nonepisodic memory, younger and older adults' performance is similar; however, differences favoring younger adults may become more pronounced depending on the nature and complexity of the task (Bäckman et al., 2001). In contrast, older adults consistently fare more poorly compared to younger adults on episodic memory tasks, likely reflecting decreased encoding and retrieval abilities by older adults (Bäckman et al., 2001).

## CAUSES AND CORRELATES OF COGNITIVE FUNCTIONING AND DECLINE

The mechanisms underlying both normative or typical cognitive changes, as well as nonnormative (atypical) changes, are debated, and in many ways this work remains in its infancy. Ongoing theoretical and empirical work focuses on factors influencing cognitive functioning and decline, including both individual or micro-level influences (e.g., individual biological factors and sensory functioning) and larger, more macro-level influences occurring within the community or society (e.g., educational system differences between generations). Chronological age alone holds limited predictive value; thus age is usually considered a proxy for other events occurring within and external to the individual. Several theories offer hypotheses related to cognitive change and decline. Neurobiological hypotheses center on cerebral aging, including shrinking of the cortex, impaired neurotransmitter functioning, and development of protein plaques and tangles. Process-oriented explanations focus on individual basic abilities as the foundation for higher order cognitive functioning. From this perspective, older adults' decreased processing speed, attention, and ability to switch tasks and multitask are cited as roots of cognitive decline.

Proponents of a central mechanism theory note that cognitive decline coincides with other declines, including sensory functioning, suggesting a more systemic problem. Related to the latter point is a serious challenge to the investigation of causes and correlates of cognitive functioning. This challenge is the theoretical and practical relationship between cognitive and sensory functioning. Prior work suggests that sensory functioning (particularly hearing and vision) may explain substantial age-related variation in cognitive performance (Li & Lindenberger, 2002). In part these relations could be due to the effect of sensory limitations on cognitive engagement in older adults' daily life, understanding of stimuli in the testing situation, and/or representation of a common mechanism underlying systemic age-related decline.

In a review of studies examining factors related to cognitive change, Christensen (2001) distinguished individual *marker variables* (i.e., fixed characteristics, including early education and genetics) from *risk factors*, which are more dynamic and malleable (e.g., health). Lower education, presence of the APOE ϵ4 allele (a genetic marker linked to Alzheimer's disease), and poorer objective health indicators have been related to negative

cognitive change, although Christensen noted that the relationship may be specific to one or more cognitive abilities. Other individual-level factors have been linked to cognitive performance and change, and these factors vary in duration and malleability. Such factors include nutrition, physical activity, lack of sleep and fatigue, mental health, including depressive symptoms, and prescription and substance use (e.g., Budson & Price, 2005; Poon & Harrington 2006; Starr et al., 2004). Additionally, contextual influences such as the role of significant others, individual and societal attitudes toward aging, changes in emotional regulation, and degree of social and cognitive engagement are important to the development and maintenance of cognitive abilities throughout the life span (e.g., Carstensen, Mikels, & Mather, 2006; Gruber-Baldini, Schaie, & Willis, 1995; Hess, 2006).

In addition to individual, micro-level occurrences, more macro-level factors are also influential in shaping cognition. For instance, differences attributed to cohort or group membership such as generation (e.g., Baby Boomers vs. Generation X), ethnicity, gender, and socioeconomic status impact experiences and access throughout life, which in turn can affect cognitive performance (e.g., Black & Rush, 2002; Orsini et al., 1986; Sloan & Wang, 2005; Willis & Schaie, 1988). In addition to group or cohort affiliation, cognitive ability may also be impacted by historical period. A prime example of cohort and time influence is the generational and period effects related to educational practices and attainment (Schaie, 2005). For instance, Flynn (1987) demonstrated that successive cohorts born in the first half of the 20th century generally evinced superior performance on intelligence (IQ) tests—a phenomenon accounting for several IQ points per generation and one not isolated to the United States. The mechanisms (e.g., nature of intelligence assessment, educational attainment) underlying the observed increase in IQ test performance have been debated as well as how mean-level IQ may or may not correspond with an increase in IQ score variance (Rowe & Rodgers, 2002).

## CONSEQUENCES OF COGNITIVE FUNCTIONING AND DECLINE

Retention of cognitive abilities is linked to critical outcomes in later life, including quality of life and survivorship. Although it is sometimes difficult to distinguish antecedent from consequence, studies and clinical evidence indicate that impaired cognition affects not only cognitive performance but also emotional state, behavior, and day-to-day functioning, including the ability to perform basic and more complex, instrumental activities of daily living (Black & Rush, 2002; Dodge, Du, Saxton, & Ganguli, 2006). The increased heterogeneity observed in older adults' functioning and the increasing prevalence of dementia in very late life provide both challenges as well as the means by which to study successful aging and resiliency in later life.

In contrast to the normative age-related changes described above, dementia and mild cognitive impairment (MCI) are nonnormative and represent significant clinical problems. MCI is usually memory related and a suspected early indicator of dementia (Jorm et al., 2004; Peterson et al., 2001). An individual with MCI experiences subjective memory complaints accompanied by observed impairment; however, activities of daily living are not impaired and the individual is not demented (Peterson et al., 2001). MCI to dementia conversion rates range from 6 to 25% depending on assessment method and study duration (Peterson et al., 2001).

Alzheimer's disease accounts for 50 to 70% of dementia cases, and the characteristic symptom is memory loss for recent events (Alzheimer's Association, 2007). Dementia is linked with an increasing inability to perform activities of daily living. Dementia prevalence rates vary with age. Estimates of the prevalence of early-onset Alzheimer's disease and dementia are 200,000 among persons younger than 65 (Alzheimer's Association, 2007). In contrast, the Alzheimer's Association estimates that 1 in 8 individuals in the United States over the age of 65 have dementia or Alzheimer's disease; this rate dramatically increases among adults 85 and older to 1 in 2 persons. Increased risk associated with greater age raises the question as to the "eventuality" of dementia and the need to delineate risk factors associated with early and late disease contraction or expression. Further research is needed to make clear the transition from normal age-related cognitive changes to cognitive impairment and/or dementia.

A growing area of inquiry within cognitive aging research focuses on cognitive prevention and intervention. To date, intervention approaches have employed a variety of techniques, focusing on specific cognitive abilities (e.g., memory, reasoning), general cognitive processes (e.g., automatic processes), the role of emotions and motivation, as well as incorporation of social partners and everyday life stimuli and activities (Ball et al., 2002; Margrett & Willis, 2006; Park, Gutchess, Meade, & Stine-Morrow, 2007; Rebok, Carlson, & Langbaum, 2007). These interventions hold much promise in the effort to enhance and maintain cognitive acuity throughout adulthood and later life. Providers working both with middle-aged and older adults should be better educated regarding the impact of cognition on adults' day-to-day functioning as well as factors that lead to diminished cognitive abilities. Frequent screening beginning in midlife is essential to ensure early detection of cognitive

impairment and to maximize treatment. From a policy perspective, funds and regulations are needed to support screening, prevention, and intervention efforts.

**SEE ALSO** Volume 3: *Aging; Dementias; Older Drivers.*

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# COHORT

Perhaps the most fundamental premise of the life course perspective is that individuals are both producers and products of a complex historical and socioeconomic context through which their life experiences are shaped and understood. The concept of *cohort* is essential to this perspective in that it provides a mechanism for identifying and interpreting the potentially distinct collective characteristics of individuals who share a common year of birth. These distinct characteristics are commonly referred to as ‘‘cohort effects,’’ and their empirical identification is a subject of considerable interest.

## DEFINITION AND USAGE

In the most general sense, *cohort* refers to a group of individuals that experiences an event during a common interval of time. For instance, students matriculating at a college in the same year are often referred to as the ‘‘entering cohort.’’ In medicine and epidemiology, the term ‘‘cohort study’’ is used to refer to a study design in which subjects exposed to a treatment or having a particular condition are followed over time and compared to another group not exposed to the condition or treatment. In this example, the cohort is the group of people enrolled in the study at its inception and is defined by the exposure status.

In life course and human development research, the common time interval defining the cohort is often one calendar year, and the shared event is birth. Thus, a birth cohort (often shortened to just ‘‘cohort’’) is the group of people sharing a common year of birth. This is a rather specialized use of the term, and if the subject matter was automobiles or wine rather than people, the analogous term used would be ‘‘vintage.’’ In the former cases, the defining event is production, while in the latter, it is birth. Similar to the way in which knowledge of a wine’s year of production conveys some information about its characteristics, cohort membership is thought to index the unique historical period in which a group’s common experiences are embedded.

Members of a birth cohort have the distinction of potentially experiencing a shared history inasmuch as they are the same age at any given point in time and thus share a common set of political, social, and cultural events at approximately the same point in the life cycle. This confounding of age and birth cohort at any given point in time sometimes leads those unfamiliar with the concepts to refer to an ‘‘age cohort.’’ No expression could be more grating to the life course scholar’s ear, and the term *age cohort* should always be avoided, for it confuses the source of the group’s distinctiveness (i.e., does a particular group characteristic reflect the members’ age or birth cohort?) and denies the significance of historical time in shaping life experiences. For example, in many

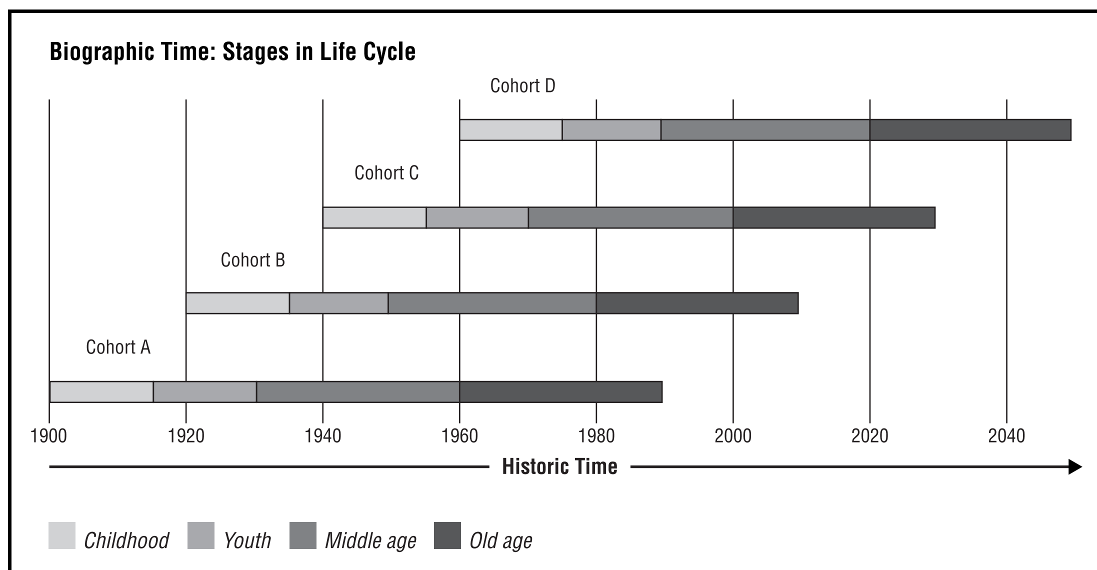


***Figure 1.*** *Interjection of biographic and historic time.* CENGAGE LEARNING, GALE.

areas of interest in the social sciences, 18-year-olds born in 1950 and observed in 1968 are likely much different than 18-year-olds born in 1990 and observed in 2008.

## HISTORICAL DEVELOPMENT: COHORTS AND COHORT EFFECTS

The work of Karl Mannheim (1952) can be credited with bringing the concept of cohort into modern social science and for developing the related idea of *generation* as well as Alwin and McCammon, 2003 for a discussion of the relationship between these concepts). In his work, Mannheim emphasized the role of events experienced early in life in shaping an individual's worldview, stating that "Even if the rest of one's life consisted of one long process of negation and destruction of the natural world view acquired in youth, the determining influence of these early impressions would still be predominant" (1952, p. 298). This idea is central to understanding cohort effects, which are the formative influences of life experiences shared by individuals having the same year of birth.

In his classic 1965 work, Norman Ryder elaborated the role of cohort in shaping social change, emphasizing the demographic procession of cohorts through the life course as a distinct mechanism for social change. Changes in the composition of the population brought on by the succession of early born cohorts by later ones, known as "cohort replacement," is a source of change in society when there are inter-cohort differences in the phenomenon of interest that endure over time. For example, much of the change in racial attitudes in the United States in the late 20th century is attributable to the dying out of earlier-born, more prejudiced cohorts, and their replacement by later-born, less prejudiced ones (Firebaugh & Davis, 1988). Ultimately, the stability of these cohort differences relies on the persistence of individuals' formative characteristics throughout their life spans—a phenomenon known as the *stability of individual differences*. Following from Mannheim, Ryder argues that cohort's place in the study of social change is based on the ideas that "transformations of the social world modify people of different ages in different ways," and that "the effects of these transformations are persistent" (p. 861).

As the works of Mannheim and Ryder reveal, the established view on the origin of cohort effects is that individuals go through a period of impressionable years during youth and young adulthood, and that experiences during these periods shape a variety of socio-individual characteristics: attitudes, beliefs, behaviors, and political orientations, among others. These youthful experiences then become the lens through which the remainder of their lives is experienced and interpreted. While the consequences of the formative experience(s) may differ throughout the life course, the basic idea of cohort effects remains the same, namely that the composition of the population is shaped by persistent birth cohort differences in the experience or interpretation of historical events.

### COHORT VS. GENERATION

Because of its multiple meanings, the term *generation* is frequently a source of confusion. While *generation* may legitimately be used as a kinship term referring to the lineage of individuals in a family, this usage is unrelated to *generations* as a cohort-based phenomenon. A generation is a group of birth cohorts, sometimes overlapping and indistinct with respect to temporal boundaries, that shares a distinctive culture and/or a self-conscious identity by virtue of having experienced the same historical events in the same way at roughly the same time in their lives. Obviously then, there is a common historical referent for cohorts and generations, but unlike *cohort,* a generation "involves more than mere co-presence" in historical and social events (Mannheim, 1952, p. 303). From a more contemporary sociological perspective, a generation is a "joint interpretive construction which insists upon and builds among tangible cohorts in defining a style recognized from outside and from within" (White, 1992, p. 31). As these theorists suggest, a sense of shared identity by its members and recognition of this identity by those outside the group are the essential components of a generation.

## CONTEMPORARY EXAMPLES

The social science literature is replete with examples of cohort effects. As discussed above, these effects commonly arise when a distinctive formative experience which members of a birth cohort (or set of birth cohorts) share shapes their perspectives throughout their lives. Major historical events such as war, economic turmoil, political protest, social upheaval, and technological transformation are frequently identified as sources of cohort effects. For example, people who grew up during the Great Depression of the 1930s have different ideas about money and economic institutions than those who grew up in more prosperous times (Elder, 1974). Other times, cohort differences are of a subtler nature and more diffuse in their origins. For example, it has been

***Greatest Generation.*** *Lines of unemployed people line up in sub-zero weather at a city relief kitchen set up in New York City on January 30, 1934 during the Great Depression. The generation that lived through the Great Depression is often referred to as the Greatest Generation.* AP IMAGES.

suggested that there was a decline in civic involvement in the late 20th century, and that this decline was, in part, attributable to the replacement of earlier-born cohorts of patriotic joiners with later-born and more cynically minded post–World War II cohorts (Putnam, 2000).

Variation in educational experiences and in the quantity and content of formal schooling contributes to cohort differences in a wide range of domains. Knowledge obtained during youth becomes a resource for future intellectual development, and shapes future social and economic opportunities. Given this, it is not surprising that cohort differences in cognitive performance are well documented. Perhaps the best-known example of a systematic cohort effect on cognitive test scores is the so-called "Flynn effect," which is the rise of average IQ test scores over time (Flynn, 1984). While Flynn concludes that a variety of environmental factors contribute to this rise, increases in educational attainment is seen as a substantial contributor. In the area of cognitive aging, significant cohort effects have also been identified. These effects are quite pronounced, and cohort differences may explain a substantial portion of what otherwise might be identified as age-related decline in vocabulary knowledge (Alwin & McCammon, 2001). Similarly, Schaie, Willis, and Pennak, examining longitudinal data (data collected from the same individuals at more than one point in time) from a broad array of cognitive domains, find cohort differences in both absolute levels and rates of change in cognitive performance and that these "cohort differences in intellectual abilities are shaped largely by changes in educational attainment . . . " (p. 64).

While educational, economic, and other social experiences are obviously important in understanding the nature of cohort effects, duration of exposure may also be an important factor in their strength. Examining the

voting behavior of women after the 19th Amendment guaranteed women's suffrage in 1920, Firebaugh and Chen (1995) found an inverse relationship between the duration of women's exposure to political disenfranchisement and their subsequent likelihood of voting relative to their male counterparts. The gender difference in voting behavior was largest in cohorts reaching adulthood prior to the passage of the amendment, and declined to nonexistence in cohorts born after 1925. Many women growing up during the period when women were not permitted to vote retained this norm and remained nonvoters even after the enactment of women's suffrage, whereas later-born women, having never been exposed to gender discrimination in voting rights, were just as likely to vote as men from their same birth cohorts.

Birth cohorts can also be distinctive and exert a unique influence based on their demographic characteristics, such as relative size (i.e., their size relative to other birth cohorts). Easterlin (1987) argues that members of the numerically large birth cohorts making up the post–World War II Baby Boom are at a significant socioeconomic disadvantage relative to members of earlier-born cohorts, because of the effect of their cohort's' size on the opportunity structure. Individuals in large cohorts may experience greater psychological stress in their youth, be less likely to marry, and be more likely to postpone having children (Easterlin, 1987).

### CONCLUSION

Individuals are both cause and consequence of the social context in which their lives are embedded. An individual's year of birth—or *birth cohort*—is the metric used to identify the particular historical context in which they live. In the words of Norman Ryder, "(t)he members of any cohort are entitled to participate in only one slice of life—their unique location in the stream of history" (Ryder, 1965, p. 844). Cohort effects and the phenomenon of cohort replacement demonstrate the reciprocal relationship between individual and society by documenting the role of historically bounded formative experiences in individuals' subsequent interpretation of, and action in, the world around them. Cohort effects are well documented in a variety of domains, and may arise from a number of sources, including economic, political, and educational experiences. Life course scholars are well served to consider birth cohort, and thus, historical context, in their explorations of the interplay between the individual and his environment.

**SEE ALSO** Volume 2: *Baby Boom Cohort; Mannheim, Karl;* Volume 3: *Age, Period, Cohort Effects; Ryder, Norman.*

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***Ryan J. McCammon***

## CONSUMPTION, LATER LIFE

**SEE** Volume 2: *Consumption, Adulthood and Later Life.*

## CREATIVITY, LATER LIFE

Creativity is built into the human species, and it is designed to last throughout the entire life cycle (Andreasen, 2005; Cohen, 2000). Howard Gardiner (1993b) who provided information on *multiple intelligences* also amplified the understanding of creativity presenting in some individuals as *Big C* creativity, and in others as *little c* creativity, but in each case its creative essence is real and

significant. Big C applies to the extraordinary accomplishments of great artists, scientists, and inventors. These forms of creativity typically change fields of thought and the course of progress, as with Albert Einstein's (1879–1955) theory of relativity, Edison's electrical inventions, and Pablo Picasso's (1881–1973) and Georges Braque's (1882–1963) cubism.

Creativity with a little *c* is grounded in the diversity of everyday activities and accomplishments. "Every person has certain areas in which he or she has a special interest," Gardner explains. "It could be something they do at work the way they write memos or their craftsmanship at a factory—or the way they teach a lesson or sell something. After working at it for a while they can get to be pretty good—as good as anybody whom they know in their immediate world."

Sometimes something little *c* can evolve to big *C* creativity, as with Maria Ann Smith (1799–1870) who during her 60s in the 1860s was experimenting in Australia with different fruit seeds. She took great satisfaction in this work, especially when something different grew—something new that she brought into existence that was valued. One of these successes was a hardy French crabapple seedling from which developed the late-ripening Granny Smith apple, bearing her name, which because of its outstanding taste and keeping qualities formed the bulk of Australia's apple exports for many years.

## DEFINITION OF CREATIVITY

Creativity is difficult to define because it is hard to conceptualize. Is it a product or a process? If it is a product, is it tangible, like a painting, or intangible, like an idea? To encompass each of these possibilities and more, the following definition is offered, borrowing on views of Rollo May (1975), Howard Gardiner (1993a), and Mihaly Csikszentmihalyi (1996): *Creativity is bringing something new into existence that is valued* (Cohen, 2000).

## THE CREATIVITY EQUATION

The *creativity equation* ($C = me^2$) represents an attempt to make an elusive concept—creativity—more graspable (Cohen, 2000). The equation states that creativity ($C$) is the result of one's mass ($m$) of knowledge, multiplied by the effects of one's two dimensions of experience ($e^2$). The first dimension is an individual inner world experience reflecting psychological and emotional growth over the years. The second dimension is the outer world experience reflecting accumulating life experience and wisdom in growing older. All these elements interact in a synergy that sets the stage for creativity. The equation also reflects the positive influence of aging where through the passage of time one is enabled to acquire more knowledge along with increased outer world experience and inner world growth. From a lighter perspective, the $me^2$ is what one realizes when looking at the creative side of oneself in the mirror—"Hey, that's *me* to a higher level!"

## CATEGORIES OF CREATIVITY

Keep in mind that creativity applies not just to artists but is also apparent in all aspects of life, including the social realm where over the history of civilization older adults have assumed the creative role of *keepers of the culture,* transmitting accumulated knowledge, traditions, and perspective.

In general discussions of creativity and aging, to the extent its existence was acknowledged, creative expression in later life was often trivialized as being narrow and simple in form. In reality, not only is creativity relevant and prevalent with aging, it shows itself in a depth and breadth of forms. Consider the following four basic patterns of creativity in the second half of life:

- *Continuing Creativity:* This was certainly the case for Herbert Block (1909–2001), better known as Herblock, the *Washington Post* cartoonist, whose nationally syndicated cartoons informed and enriched American culture for more than 70 years. His first cartoon appeared when he was in his 20s; his last was published less than two months before he died at age 91.
- *Changing Creativity* (while changing creativity can be considered a variant of continuing creativity, it is distinguished by the fundamental change in creative direction that the individual takes as he or she ages): The great mathematician and philosopher Bertrand Russell (1872–1970), for instance, focused tightly on mathematics in his youth and middle age. When he was 42 he and Alfred North Whitehead (1861–1947) published the *Principia Mathematica*, which remains a masterpiece of mathematical logic and synthesis. As he grew older his focus shifted to deeper issues, particularly philosophy, and the many social ills of his time. At the age of 73 he published his renowned work, *A History of Western Philosophy* after which he received the Nobel Prize in Literature, and he remained passionately involved in issues of peace and justice until he died at 98.
- *Commencing Creativity:* Some people first significantly tap into their creative potential around age 65; they are often referred to as *late bloomers.* This author's own ideas about creativity with aging and especially about late bloomers blossomed after a visit to a retrospective exhibit of a half-century of folk art at Washington's Corcoran Gallery of Art in Washington, D.C. The works of 20 of the most highly regarded African American folk artists produced from 1930 to 1980

***Grandma Moses.*** *Artist Anna Mary Robertson Moses, known as Grandma Moses, works on one of her paintings at her home in Eagle Bridge, NY, September 1960, the year before she died at age 101. Grandma Moses is one of the most famous examples of someone who found a new creative outlet late in life.* AP IMAGES.

were exhibited. Reading the artists' brief biographies revealed that of the 20 exhibitors, 16—80%—had begun painting or reached a recognizable mature phase as artists after the age of 65; 30% were 80 years of age or older (Livingston & Beardsley, 1982). The folk art story is particularly important because whenever examples are given of important art by older artists such as Pablo Picasso (1881–1973), Titian (born Tiziano Vecelli, lived ca. 1485–1576), or Georgia O'Keeffe (1887–1986), many fire a reflex response that they are "outliers, exceptions from the rule, not typical of aging." But with folk art, older artists are the rule—across the racial and ethnic diversity of our culture (Hartigan, 1990). With their prominence, their work cannot be diminished as uncommon events. Whenever one can find a field, any field, dominated by older people—such as folk art—then one can no longer deny or trivialize creative potential with aging. And what a statement they make with their numbers about it truly being never too late in life to be creative; they make the ultimate case for late blooming. Grandma Moses (1860–1961) who only at 78 turned her serious attention to painting, with her work selected for 15 international exhibits over the next 23 years until she was 101, was but one of a huge crowd of older folk artists with a major impact. William Edmondson (ca. 1882–1951), who had been a janitor until 65 when he lost his job, turned then full-time to sculpture. Louise Dahl-Wolfe, a photographer, captivated by Edmondson's work, sent a portfolio of images of his sculptures to the Museum of Modern Art (MOMA) in New York. The result was that at 67, Edmondson became the first African American artist in the history of the MOMA to have a solo exhibit, opening the doors to generations that followed (Livingston & Beardsley, 1982).

- *Creativity connected with loss:* There is nothing romantic about loss, but the human condition and the human spirit are such that when loss occurs, it is in our nature to try to transcend it by tapping into unknown or underdeveloped other capacities that we possess. Such is captured in the life and work of William Carlos Williams (1883–1963) of Paterson, New Jersey. Carlos Williams was a pediatrician who also wrote poetry. But a stroke in his 60s left him unable to continue practicing medicine and sent him into a depression that required a year of hospitalization. He gradually emerged from that trauma and loss, turning full-time to poetry; the collection was published in his book *Pictures from Brueghel and Other Poems* when he was 79 years old. It was awarded a Pulitzer Prize. In his later-life poetry, William Carlos Williams wrote about "old age that adds as it takes away."

## PSYCHOLOGICAL GROWTH AND DEVELOPMENT WITH AGING

Psychological growth and development sets the stage for creative expression with aging. Psychoanalytic research has found that older adults are more in touch with their inner psychological life than at any point in the life cycle (Maduro, 1974). What an asset in a creative and artistic sense to be more in touch with one's inner world that negotiates access to potential in new ways as we continue to develop with aging.

Four recently described, overlapping developmental phases in the second half of life set the stage for positive change and creative expression (Cohen, 2004, 2005):

**Midlife Reevaluation Phase** The first of four recently described, overlapping developmental phases in the second half of life generally occurs during one's early 40s to late 50s: Plans and actions are shaped by a sense of crisis or quest, although considerably more by quest. Midlife is a powerful time for the expression of human potential because it combines the capacity for insightful reflection with a powerful desire to create meaning in life. This quest is catalyzed in midlife by seriously confronting for the first time one's sense of mortality; on passing the midpoint in the life cycle, one contemplates time left instead of time gone by. This dynamic new inner climate becomes a catalyst for uncovering unrealized creative sides of ourselves, as reflected in Alex Haley's midlife quest that culminated in his publication of *Roots* (1976).

**Liberation Phase** This phase usually emerges from one's mid-50s to mid-70s. Plans and actions are shaped by a new sense of personal freedom to speak one's mind and to do what needs to be done. There are often mounting feelings of "if not now, when," "why not," and "what can they do to me?" that foster a sense of inner liberation. With retirement or partial retirement, common during these years, comes a new experience of external liberation and a feeling of finally having time to experiment with something different.

**Summing-Up Phase** This phase comes most frequently in one's late 60s into one's 80s—or beyond. Plans and actions are shaped by the desire to find larger meaning in the story of one's life as a person looks back, reexamines, and sums up what has happened. This process motivates people to give of the wisdom they have accrued throughout their lives. In the role of keepers-of-the-culture, people who reach this phase begin to share their lessons and fortunes through autobiography and personal story telling, philanthropy, community activism, volunteerism, and other forms of giving back. With Martha Graham (1894–1991), giving back was through choreography from her mid-70s to mid-90s. It is also a time to deal with

### PRAGMATIC CREATIVITY AND AGING

Pragmatic creativity is a form of creativity that researchers describe as increasing with aging (Cohen, 2005). In his mid-70s Howard Miller, the author's father-in-law, illustrated very well the concept of pragmatic creativity with aging. Stuck in a snowstorm with his wife and unable to find a cab to bring them back home, Howard spotted the steamy windows of a pizza parlor and experienced the flash of a creative solution. He took his wife's arm, carefully crossed the slushy road, entered the pizza place, walked up to the counter, and ordered a large cheese pizza for home delivery. He then asserted, "There's one more thing." "What's that?" asked the clerk, to which Howard convincingly replied, "I'd like you to deliver us with it." And they did.

Two key factors explain the greater frequency of pragmatic creativity with aging: (a) the influence of accumulated life experience over time—reflected in the creativity equation, and (b) the influence of the *liberation phase* ("What can they do to me?"), as illustrated by Howard. This is the other part of the $e^2$ in the creativity equation. The flash of a creative solution that Howard experienced reflects "the New Senior Moment" (Cohen, in press).

unresolved conflicts and unfinished business in manners that motivate us to develop creative new strategies.

**Encore Phase** This phase can develop from one's late 70s to the end of one's years. Plans and actions are shaped by the desire to restate and reaffirm major themes in one's life but also to explore novel variations on those themes and to further attend to unfinished business or unresolved conflicts. The desire to live well to the very end has a positive impact on family and community and often influences decisions to have family reunions and other events. The Delany sisters (Sarah [1889–1999] and Bessie [1891–1995]) after a filled century of life, engaged in an encore—a story about themselves with a title that set the stage for an encore: *The Delaney Sisters: The First 100 Years*, which became a best-selling book.

### CONCLUSION

"In the past few years, I have made a thrilling discovery... that until one is over 60, one can never really learn the secret of living. One can then begin to live, not simply with the intense part of oneself, but with one's entire being."

—Pulitzer Prize-winning novelist Ellen Glasgow

**SEE ALSO** Volume 3: *Lifelong Learning; Wisdom.*

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*Gene D. Cohen*

# CRIME AND VICTIMIZATION, LATER LIFE

The victimization experiences of older adults, defined as persons age 65 and older who have suffered injury or loss due to a crime, is important to the study of the life course and a pressing social concern. Developmental changes associated with advancing age and changing social circumstances occurring in later life affect key indicators of well-being, including health and financial status as well as personal safety. Research has found that the likelihood of victimization consistently differs by age. It also shows that the form victimization takes varies over the life course, and reflects the interrelationship between victims, offenders, the contexts in which crimes occur, and the degree of physical, psychological, and financial harm. The likelihood of being victimized generally follows an age curve—peaking in late adolescence and declining with older age. A life-course understanding considers an individuals' changing social roles over the life span as well as cohort, historical, and cultural differences that impact the relationships between age and victimization.

Most of what is known about victimization in later life comes from victim surveys including the National Crime Victimization Survey, an annual survey of U.S. households of persons 12 years and older, and the British Crime Survey, a nationally representative household survey of adults 16 and older living in England and Wales. These surveys provide information about victimization experiences among older persons and the households in which they reside. A chief finding is older adults are less likely to become victims of violent crimes than persons under the age of 65—a pattern that holds from 1993 to 2006 in the United States and the United Kingdom (Klaus, 2005; Nichols, Kershaw and Walker 2007; Rand and Catalano, 2007).

Similarly, households headed by an older adult reported lower levels of property victimizations compared to households headed by persons under 65 in both the United States and the United Kingdom. In one offense category older adults in the United States had similar victimization rates as persons under the age of 65—personal larceny which includes purse snatching and pocket picking (Klaus, 2005). In 2006 older adults made up 14% of the U.S. resident population 12 years and older and comprised less than 1% of violent and property victimizations (Rand & Catalano, 2007). Among older adults in the United States, violent and property victimization varied across social categories with higher rates found among males and Blacks ages 65 to 74, and households headed by an older adult with lower family income, city residence, and renting residence (Klaus, 2005).

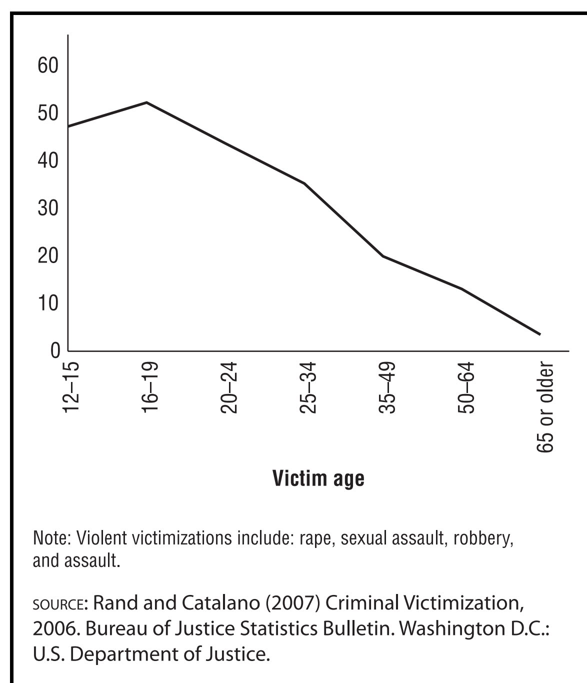


***Figure 1.*** *Violent victimization rate, 2006, per person age 12 years or older.* CENGAGE LEARNING, GALE.

Persons age 65 or older were disproportionately affected by property crimes compared to younger persons. About 9 in 10 victimizations of older adults in the United States were property crimes, including household burglary, motor vehicle theft, and other theft, compared to about 4 in 10 victimizations among younger persons (Rand & Catalano, 2007). Older persons were about as likely as those under age 65 to be victims of personal larceny with contact, including purse snatching (Klaus, 2005). The violent victimization rate of older adults in 2006—including rape, sexual assault, robbery, and aggravated and simple assaults—was about 4 victimizations per 1,000 U.S. residents age 65 and over, compared with 42 victimizations per 1,000 for persons between the ages of 12 and 34 and 17 victimizations per 1,000 for persons between the ages of 35 and 64 (Rand & Catalano, 2007).

Older persons are more likely to be victimized in or near their home and in the daylight hours (Klaus, 2005). In responding to nonfatal violent attacks, older persons in the United States are less likely to resist, about as likely to receive serious injury, and about as likely to be confronted with an armed offender as younger persons (Klaus, 2005). In the United Kingdom, and the United States, older persons are also more likely to report violent incidents of crime than their younger counterparts (Klaus, 2005; Chivite-Matthews & Maggs, 2002). Despite older persons being less likely to experience criminal victimization, fear of crime in the United Kingdom is reported at similar levels among older and younger victims; levels among older women are greater than those reported by older men (Nichols, Kershaw, & Walker, 2007).

Researchers have sought to explain differences in victimization risk by age and other social groupings, including gender, ethnicity, and social class. Lifestyle theory attributes the lower risk of victimization of older persons to differences in lifestyles that decreases exposure to settings associated with greater risk. Examples of settings and lifestyle routines associated with increased risk of victimization include working outside the home, using public transportation, residing in the city, frequenting bars, and going out in public in the evenings. Situational explanations identify contexts that specifically put older persons at higher risk due to the absence of a guardian such as a police officer, or cohabiting family member or roommate. For example, older adults residing alone in crime-prone urban areas less patrolled by police would face greater risks than adults living in more protected contexts.

Importantly, certain contexts are unique to older adults and less understood with respect to victimization occurrence and impact. This includes situations where the older adult is dependent on others—often due to diminishing mental or physical capacities brought on by aging. Unscrupulous caretakers may financially exploit older adults by cashing checks without permission, stealing money and property, and forging and coercing signatures. Older victims may be reticent to report incidents to the police out of concern that it would get a family member in trouble, embarrassment, or out of fear of retaliation from those they depend on for care. Loneliness and isolation of the older adult may also increase susceptibility to being a victim in cases where perpetrators seek out older persons by telephone, mail, and door-to-door solicitation for various types of consumer frauds and identity theft. Further, as health care needs increase, the older person will be more likely to seek care and be subject to charges for unnecessary or unperformed tests, nursing home abuses, misrepresentation of services or quality, and fraudulent medical equipment sales with implications for physical, psychological, and financial harm.

The relatively low property and violent victimization rate of older adults detracts from the potential for serious impact on the aged as well as the alternative contexts unique to older adults where victimizations may go undetected or unreported. A future research agenda on the topic of older adults and crime and victimization includes: improving measurement of victimization by focusing attention on offenses that impact older adults including financial exploitation, neglect, and abuse; extending existing victimization surveys to include

nonhousehold, institutional populations such as nursing homes; design more rigorous panel data collections to more effectively disentangle age, cohort, and period effects on criminal victimization over the life span; and developing age-specific strategies for law enforcement and victim service providers that address the needs of the older population from both health and criminal justice policy perspectives (Lachs, Bachman, & Williams, 2004)

**SEE ALSO** Volume 2: *Domestic Violence;* Volume 3: *Elder Abuse and Neglect.*

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***Mark Motivans***

# CULTURAL CAPITAL, LATER LIFE

**SEE** Volume 1: *Cultural Capital.*

# CULTURAL IMAGES, LATER LIFE

In contemporary technological society cultural views of aging are influenced by and reflected in media portrayals, which provide a snapshot of the aging process and provide a cultural perspective on that process. Cultural images are representations of individuals, groups, and society that are captured by a communication event. That event can be a simple picture, a television program, a speech, or a song; essentially any form of communication can serve as a cultural representation.

## NATURE AND EFFECTS OF CULTURAL REPRESENTATIONS

Cultural representations are important because they influence the way people view other social groups, other cultures, and even themselves; media representations serve as socialization mechanisms related to social groups. For example, exposure to television's portrayals of women in traditional roles is associated with children's development of stereotypical sex-role attitudes (Kimball, 1986). The ways in which viewers perceive other social groups is influenced by television portrayals of those groups (Harwood, 1999, Mastro, 2003). Furthermore, portrayals of social groups in the media have consequences for individuals who belong to social groups, who may come to endorse or reject particular ideas about their groups through exposure to the media (Harwood & Roy, 2005).

Additionally, media images influence the specific cognitive schemas people develop to process information about the world around them. Cognitive schemas are mental structures such as stereotypes that help individuals organize how they think about people and situations. When people are exposed to new messages, their schemas are modified (Schneider, 2004). If media images of older adults are negative, a negative stereotype or schema is likely to develop (Robinson, Gustafson, & Popovich, 2008). The activation of negative stereotypes in perceptions of older adults in turn influences communication with older adults and can lead to age-adapted communication strategies such as patronizing or demeaning communication directed at older people (Hummert, 1994, Hummert, Garstka, Ryan, & Bonnesen, 2004). The activation of age-adapted communication that is based on negative stereotypes can occur even in close family relationships such as grandparent-grandchild relationships (Anderson, Harwood, & Hummert, 2005). Thus, the potential impact of cultural images on people's interactions with one another provides a strong reason for examining the representations of older adults in multiple forms of media.

## PORTRAYALS OF AGING IN MEDIA

Research on media portrayals of aging has focused mainly on prime-time television, daytime television, television advertising, and print advertising, primarily in the United States. That research has examined the presence of older adults in media, the role prominence of older adults in media, and images of aging. The most common form of research works by counting older adult characters and comparing their numbers to those in the population.

Older adult characters are defined in a variety of ways in this research (which has been something of a detriment to effective comparisons across studies). Common methods include defining a range of physical features that define old age (e.g., gray hair, noticeably wrinkled skin, use of a walking cane, etc.), defining based on relational roles (e.g., being a grandparent), or simply defining based on chronological age (e.g., cut-offs from 50 to 65 have been used). Coders demonstrate substantial levels of reliability on all these tasks. One goal for this research area should be to standardize a definition of what counts as an older character. We suspect that definitions based on chronological age are least susceptible to bias; we would advocate for work to consider multiple age groups of older adults (e.g., distinguishing 60 to 70 from 70 and above) and to avoid including characters in their 50s from consideration as "older."

In the context of age distribution estimates from census data, older adults consistently are underrepresented in prime-time television programming (Robinson & Skill, 1995, Harwood & Anderson, 2002), television advertising (Hiemstra, Goodman, Middlemiss, Vosco, & Ziegler, 1983, Miller, Leyell, & Mazachek, 2004, Roy & Harwood, 1997), and advertising in national magazines (Gantz, Gartenberg, & Rainbow, 1990). Older adult women are particularly underrepresented relative to older men (Signorielli & Bacue, 1999). Several authors have concluded that this skewed representation of older women reflects a disproportionate value placed on youth for women (Gerbner, Gross, Signorielli, & Morgan, 1980). In contrast, J. Harwood and K. Anderson (2002) found that older adult men and older adult women were equally underrepresented compared with census estimates, although young adult women were found to be overrepresented relative to middle-aged women, again suggesting a bias toward youth for women.

Studies of role prominence examine whether older adults are portrayed as central characters in television shows and advertisements. Researchers have explored major roles, minor roles, and background roles in various forms of television programming. Most older adult characters in television advertisements play minor or background roles (Roy & Harwood, 1997, Swayne & Greco, 1987, Robinson, 1998). For example, A. Roy and Harwood (1997) determined that more than 50% of older adult characters in television advertisements appear in background roles. However, the percentage of older adult characters in major roles increases when the advertised product targets older adults (Robinson, 1998).

Harwood and Anderson (2002) found that the role prominence of older adult characters in prime-time comedies and dramas does not differ significantly across age groups. However, as female characters age, they become less significant to the plot compared with male characters (Gerbner et al., 1980, Vernon, Williams, Phillips, & Wilson, 1990). J. Robinson and T. Skill (1995) noted that peripheral and minor characters may be more revealing of cultural stereotypes in light of the limited ability for development of depth and complexity in those characters and the need for such characters to serve a "quick and dirty" story function. The current television landscape does not offer many older people in lead roles, but examples from the past include *Matlock*'s Andy Griffith and *Murder, She Wrote*'s Angela Lansbury. A character like the grandfather on *The Simpson's* would qualify as a supporting character, while truly peripheral characters typically have one-off background roles (e.g., a store clerk who is only seen once and says a single line).

Studies of the quality of specific images or portrayals focus on personality traits, cognitive abilities, activities and occupations, physical features, and age stereotypes related to older characters. Much of this research has found negative portrayals of older adults (Gerbner et al., 1980, Harris & Feinberg, 1977). For example, S. R. Stern and D. E. Mastro (2004) found that older adults are substantially less likely to be portrayed in occupational roles than are younger characters; their research also showed that female characters suffer particularly on this front, with virtually no older women being shown in productive occupational roles. Of course, these representations might accurately reflect levels of labor force participation among older women; nonetheless, they do also serve as powerful messages about expectations for this group and for future generations as they age.

Other researchers have uncovered more positive portrayals in prime-time television programming (Bell, 1992, Dail, 1988), cartoons (Robinson & Anderson, 2006), and television advertising (Miller et al., 2004, Roy & Harwood, 1997). For example, J. Bell (1992) focused on the prime-time television shows most watched by older adults and found a combination of positive (e.g., powerful, affluent, healthy, active, admired) and negative (e.g., eccentric, foolish, comical) stereotypical portrayals. P. W. Dail (1988) found a similar pattern of positive and negative portrayals in the perceived cognitive ability of older adult characters. Generally, the older adult characters were seen to have positive mental orientation and verbal interaction but had moments of disorientation, confusion, or forgetfulness. This research focused on a very narrow slice of programming rather than the broad areas of programming examined in studies demonstrating negative portrayals.

Research on television advertising has found that older adults generally are portrayed positively but not as positively as other age groups (Miller et al., 2004, Robinson, 1998, Swayne & Greco, 1987). For example, Roy and Harwood (1997) found that older adults were

portrayed as strong, happy, active, and lucid. However, T. E. Robinson (1998) found that the target of the advertisement played a role in the way older adults were portrayed. He examined facial expressions, personal characteristics, and behaviors of older adult characters and found that older adults generally are portrayed as mean, irritable, or grumpy, but are presented as happy when the target of the advertisement is other older adults. Advertisements targeting older adults include products such as medicine, mobility aids, and emergency alerts. Some of these studies reach conclusions about broadly positive portrayals of older adults without doing a relevant comparative examination of younger characters (Harwood, 2007). For instance, T. Robinson and C. Anderson (2006) found predominantly positive portrayals of older characters in cartoons but did not examine younger characters to determine whether those characters are portrayed even more positively. While research has not examined longitudinal trends, reviews of this literature indicate very little in the way of trends towards increasing or more positive portrayals (J. Robinson, Skill, & Turner, 2004).

Most researchers who explore images of aging in media use a quantitative content analysis method. Researchers record a representative sample of programming and analyze the quantity and quality of portrayals through the use of objective coding of characters by independent coders. However, Harwood (2000) took a different methodological approach and provided a textual analysis of one intergenerational interaction in the show *Frasier. Frasier* portrays the interactions between the divorced psychiatrist Dr. Frasier Crane; his psychiatrist brother, Niles; and their father, Martin, a retired police officer. Harwood's analysis demonstrated that this intergenerational interaction included a high level of age salience. The intergenerational bonding that occurred demonstrated a duality of tension between portraying the older adult as counterstereotypical and simultaneously using the stereotype of older adults as forgetful to create humor in the interaction. Thus, although the older adult character generally is portrayed positively, Harwood argues that the lurking incoherence of the portrayal is problematic because it relies on and reinforces the negative stereotypes of aging. Harwood and Giles (1992) reached similar conclusions concerning (counter)-stereotypical portrayals in *The Golden Girls,* which focuses on three retired women who live together in Florida, along with the mother of one of the retirees.

## EFFECTS OF MEDIA IMAGES ON VIEWERS

The effects of media portrayals of aging can be divided into effects on older and younger viewers. A concern in regard to older viewers has been with the effects on their own orientation and attitudes toward aging. M. M. Donlon, O. Ashman, and B. R. Levy (2005), for instance, examined the long-term effects of media consumption by measuring an estimate of life-time television consumption—they multiplied number of years of television viewing by the average number of hours viewed in the current year. They found that older individuals (age 60 to 92) with larger life-span exposure to television have significantly more negative stereotypes of aging than do those with less television exposure (e.g., they were more likely to rate other elders as grumpy or senile). Television exposure accounted for more than 10% of the variance in negative stereotyping, more than did health, depression, education, or age. This research illustrates the potential for television to reinforce self-stereotyping among older adults and ultimately lead to more negative experiences of aging.

Experimental studies have examined whether specific types of portrayals affect different types of older people in different ways. M-L. Mares and J. Cantor (1992) examined whether positive versus negative portrayals of older adults affected depression scores among lonely and non-lonely older viewers. Their findings indicated that older people who are not lonely are made more depressed by seeing negative media images of older people (e.g., images portraying an older person as depressed and socially isolated). In contrast, the same images made lonely older people less depressed. The second finding is explained by the authors in terms of social comparison processes: For individuals who are experiencing problems in their lives, seeing that they are not alone and that others are similarly isolated may serve a comforting function, conveying the message that their distress is not unique to them. This work demonstrates that not all older people respond to portrayals of older adults in the same manner and thus draws attention to the fact that an ideal portrayal of older adults on television will be characterized not by simple positivity but by diversity.

Similar concerns exist in regard to younger people. Gerbner et al. (1980) examined whether overall television consumption is associated with perceptions of the prevalence of older people in the population. As might be expected in light of the data on underrepresentation presented above, teens who viewed a lot of television tended to see older adults as constituting a smaller proportion of the total population compared with those who watched less television. These heavy television viewers also had more negative attitudes about aging. The effect sizes here are small, and there has been discussion about whether they persist when other factors are statistically controlled (Passuth & Cook, 1985).

### THEORETICAL FRAMEWORKS

There are relatively limited theoretical frameworks to utilize in examining the content of media portrayals of older adults. One common option is to base such work on media effects theories. For instance, the content analysis of Gerbner et al. (1980) is grounded in cultivation theory, which says that heavy viewers of television will come to view the television world as the "real world," and so their mental representations of the world will come to resemble television. If that is the case, then there is need to understand the television world in more detail. Similar rationales can be developed that are based on, for instance, social cognitive theory (Bandura, 2002). This theory would suggest that individuals are more likely to model (learn and imitate) behavior that is performed by attractive media characters. That approach would recommend examining interactions between younger and older characters on television in terms of the attractiveness of the younger persons. Younger viewers would be more likely to adopt intergenerational behaviors modeled by attractive peers; therefore, seeing discriminatory or patronizing behavior by a younger person on television would be more potentially damaging if the young person was attractive. No such work has been done, but it presents a productive theoretically driven direction for future research. This perspective also draws attention to the need for more extensive examinations of intergenerational interaction on television. Very little work has considered how older people and younger people talk to one another on television or the effects of those images on the well-being of and interactions among young and old adults.

An alternative to the effects-oriented approach has been described by Harwood and Anderson (2002). They suggest examining media content from an ethnolinguistic vitality perspective (Giles, Bourhis, & Taylor, 1977, Harwood, Giles, & Bourhis, 1994). Vitality theory describes the various facets that contribute to a group's strength in society through a systematic examination of sociostructural features such as demography, social status, and institutional support. For instance, groups in the majority with support from government and with a history of societal prestige will exercise more power in most societies than minority groups with a history of exclusion and oppression. Within the category of institutional support, Giles et al. (1977) define media institutions as important, and other work has corroborated the importance of media in determining group vitality (Abrams, Eveland, & Giles, 2003, Harwood & Roy, 2005). Vitality theory specifies media representation as an important topic independent of effects in light of its role as a component of a theoretically grounded understanding of where groups stand in society. Thus, cultural representations provide a socialization function within groups as well as reflecting a broader perception of how the dominant culture views various social groups.

## CULTURAL VALUES AND CHINESE MEDIA

Media representations of aging have been explored in various cultural contexts outside North America, including India, Germany, Britain, South Korea (Lee, Kim, & Han, 2006), and China (Zhang, Harwood, Williams Ylanne-McEwen, Wadleigh, & Thimm, 2006). Y. B. Zhang and J. Harwood (2004) support the conclusion that a norm of respect for older adults is salient in Chinese television advertisements. Filial piety (*Xiao*) is a cultural norm that is based on the traditional Confucian values of hierarchy and respect for elders; it is clear from their research that advertisers use this value to make their products appeal to consumers. Ads for health-related products, for instance, include tag lines suggesting that the parents' health is the responsibility of the child. Zhang and Harwood's (2004) research explores the extent to which modernization and globalization of Chinese culture is reflected in representations on Chinese television. These authors note the continued presence of traditional themes, but often blended with themes relating to progress, technology, and individual gratification. Themes emphasizing a value of "youth" are also strong in Chinese advertising; Lin (2001) suggested that this is in part a function of the one-child policy, which has resulted in a "little emperor/empress" phenomenon for couples with a single child.

### FUTURE RESEARCH DIRECTIONS

As was noted above, research exploring the intergenerational interactions portrayed on prime-time television could provide additional insight into the role of socialization of media portrayals. Researchers could expand their methodological approach by incorporating mixed methods to explore both the presence and the portrayal of older adults through content analysis and the interactions portrayed through discourse analysis. Furthermore, research that explores the effects of these types of interactions on young adults' perceptions of older adults could provide theoretical support for the media effects approach. That approach often is used as a rationale for doing content analytic work on cultural images of aging

in the media, but the effects of and impact on real-world intergenerational encounters has not been explored.

Particular areas of content are also deserving of more attention than they have received. In particular, considerable research shows that older adults prefer informational and educational programming (news, etc.) to entertainment programming (sitcoms, etc.) (Riggs, 1996, Robinson, Skill, & Turner, 2004). However, relatively little is known about how older people are portrayed in news programming and other news sources (e.g., newspapers, educational programs, C-Span, quiz shows). Examination of such programs would help researchers understand whether the types of media preferred by older people are the types that portray older people in greater numbers or in a more positive or diverse fashion. Additionally, as generational shifts occur the type of program that older people consume are likely to change. Future research should explore whether the influence of the baby boomers on the media preferences of older adults.

**SEE ALSO** Volume 3: *Age Identity; Ageism/Age Discrimination.*

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# D

## DATA SOURCES, LATER LIFE

*This entry contains the following:*

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*James W. McNally*

II. BERLIN AGING STUDY (BASE)
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VII. WISCONSIN LONGITUDINAL STUDY (WLS)
*Carol L. Roan*

### I. GENERAL ISSUES

The term *data* is used to define two distinct products: published literature representing the distillation of research findings and research data, the information underlying those publications. Research data include a growing universe of federal and public tabulations, surveys, and other forms of secondary information. These data allow researchers to examine issues that go beyond the findings presented in published research, and the availability of such data has enhanced understanding of aging and the life course. Sources of data on older adults have increased dramatically as a result of the worldwide growth of the aged population and scholars' and policy makers' need to understand the implications of that growth. The value of these data is enhanced by the development of more detailed survey designs, access to more powerful computers, and more sophisticated models for measuring attitudes, behaviors, and change.

#### EARLY STUDIES OF AGING

Although there has always been interest in aging, many historians consider the 1881 publication of *Clinical Lectures on the Diseases of Old Age* by Jean-Martin Charcot as the formal beginning of gerontology. In the eight decades after that publication, studies of aging episodically appeared in the published literature, but, with the exception of articles such as P. K. Whelpton's 1930 article on the aging transition, there was not a significant social science literature on aging until the 1960s.

At that time researchers such as Agnes Brewster (1961) began examining the potential health care costs of a growing aging population, and George Maddox presented the results from one of the earliest longitudinal studies on the aged in 1963; by the late 1960s researchers began exploring family support relationships between aging parents and their adult children (Rosenmayr, 1968). The 1970s saw a growing body of research as studies addressed topics such as living arrangements (Montgomery, 1972), late-life friendships across sexes (Booth & Hess, 1974), and policy research on alternatives to institutionalization (Abdellah, 1978). That work was informative, but it was also static, as researchers could not replicate or build on those published studies

because they lacked access to the underlying data resources that measured the outcomes. The growing availability of mainframe computers in the late 1970s changed the state of research. The unprecedented growth and declining costs of computing power introduced a tremendous degree of equity into data analysis, and the subsequent flood of secondary data available for research has made good use of this capacity.

## THE EMERGENCE OF DATA RESOURCES FOR THE STUDY OF LATER LIFE

Like the literature on aging, data sources grew slowly, beginning in the late 1960s. An early example of data focusing on the lives of the elderly was the 1968 National Senior Citizens Survey (Schooler, 1979), a national study of persons 65 years of age and older. It was representative of studies that explored the quality of life by measuring life satisfaction, types of social relationships, and access to community services among the elderly. Most early studies of aging had the common weakness of being cross-sectional, providing a snapshot of complex behaviors at a single point in time rather than allowing researchers to study change across time.

The Retirement History Longitudinal Survey conducted by the U.S. Department of Commerce in 1969 (Social Security Administration, 2002) was an early example of the use of longitudinal (or multiwave) data collected by the federal government and then repeated six times over 10 years to document the transition to retirement as a process that occurred over time. Although the six Retirement History Longitudinal Surveys provided insights into the determinants of retirement, more importantly, they showed the value of longitudinal designs, encouraging the application of this framework to a wide array of studies.

Beginning in 1984, the Longitudinal Study of Aging (LSOA) was another landmark study that examined changes in the aging life course (U.S. Department of Health and Human Services, 2007b). The LSOA followed a sample of persons age 70 years and over across four waves, ending in 1990. Not only did this study provide detailed information about health status, living arrangements, social and economic support, and health insurance, along with detailed Medicare records, it also followed the mortality of the respondents and included interviews with persons named by decedents for additional information. The LSOA reflected the standard for aging research data at that time, and its use in more than 1,000 scholarly publications since its release reveals its value.

From those early studies, a clear set of issues emerged that defined studies of aging and the life course. Health and disability issues predominated, but equally important were issues of economic stability and the structure of support networks. Because all these factors changed as a person aged, it was also clear that longitudinal data offered the best opportunities for addressing questions related to successful aging.

## CONTEMPORARY DATA RESOURCES FOR THE STUDY OF LATER LIFE

Since the early 1990s research data have been used to address many issues related to the life course of aging persons. The National Long-Term Care Survey conducted from 1982 to 2004 (Manton, 2007) addressed a major weakness in most studies of the elderly. This survey collected information on the institutionalized elderly, enabling the study of the health and disability status of all the elderly, not just those living in households. Most studies of aging look only at noninstitutionalized populations, and other studies of the institutionalized elderly, such as the National Nursing Home Study (U.S. Department of Health and Human Services, 2007c), tend to be cross-sectional and thus cannot be used to study changes in health.

Specialized studies of the aged also emerged in more recent years. The Changing Lives of Older Couples Study (Nesse, Wortman, House, Kessler, & Lepkowski, 2003) collected data on marriage and the spousal bereavement process for older adults, and the Resources for Enhancing Alzheimer's Caregiver Health study (Schulz, 2006) examined the burden on those caring for someone with dementia or Alzheimer's disease. The breadth of aging studies has ranged from the Religion, Aging, and Health Survey by Neal Krause (2006), which looked at the impact of religion on health and emotional satisfaction, to the National Social Life, Health, and Aging Project (Waite et. al., 2007), which provided a rare examination of late-life sexuality.

Among the resources that emerged after the 1990s, perhaps the most influential has been the Health and Retirement Study (HRS; U.S. Department of Health and Human Services, 2007a). Begun in 1992, this complex study of aging has been repeated every 2 years, and interviews have been conducted with more than 27,000 individuals age 50 and older. Touching on a broad array of topics from economic stability to health, disability, and family support, the HRS represents a highly successful study measuring the major issues of aging and following the lives of the elderly over time. In later years, the HRS model was expanded internationally with studies such as the Survey of Health, Ageing, and Retirement in Europe (Börsch Supan, 2005), the English Longitudinal Study of Ageing (Taylor, 2003), and the Mexican Health and Aging Study (Soldo, Wong, & Palloni, 2002), which incorporated features comparable to the HRS and allowed a broader understanding of aging trends worldwide.

Many of these data sources are made available to the general public through the National Archive of Computerized Data on Aging (NACDA), which is funded by the National Institute on Aging. The NACDA acquires, preserves, and processes data relevant to gerontological research, disseminates the data to researchers, and facilitates the use of the data. By preserving and making available the largest library of electronic data on aging in the United States, the NACDA offers opportunities for data analysis on major issues of scientific and policy relevance.

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## II. BERLIN AGING STUDY (BASE)

The Berlin Aging Study (BASE) was established in 1989 to investigate questions about aging and dying in Germany from the collaborative perspectives of four disciplines: psychiatry, psychology, sociology, and internal medicine (Baltes & Mayer, 1999). Two unique features of the study are (a) an extensive face-to-face protocol of standardized interviews, tests, and clinical examinations and (b) a heterogeneous age-by-sex stratified sample of men and women ages 70 to over 100 years (born between 1883 and 1922).

At baseline (1990–1993), demographic information was obtained from the obligatory Berlin city registry for a verified parent sample of 1908. The initial participation rate was 78%. A total of 516 men and women (27% of the parent sample) agreed to complete the BASE extensive protocol of 14 individual 90-min sessions, which

were scheduled over 3 to 5 months. An additional 412 persons (21%) participated at the level of a single 90-min multidisciplinary assessment and 336 (18%) provided a 30-min interview. Information obtained from these subgroups is used to examine the selectivity of the core 516 sample. That means that researchers were able to assess the extent to which the core sample was a positive selection of the original sample. The mean age of the core BASE sample was 85 years at baseline and 14% were living in institutions, such as a nursing home. As of 2007, the study involves seven longitudinal measurement occasions. Subsamples have also been recruited for intensive supplementary studies. Mortality information for the entire sample is obtained regularly from the city registry.

More than 1,000 publications reporting cross-sectional and longitudinal findings from BASE are listed on the project web site (the Internet address is given in the bibliography). These publications deal with a wide range of discipline-specific and multidisciplinary topics regarding the young old (persons ages 70 to 85) and the oldest old (persons 85 and older). Central topics include social inequality, family life, life history and cohort experiences, current life contexts, intergenerational transfer of resources, use of health services, physical health, disability, dental health, dementia, depression, everyday competence, cognitive aging, self and personality, social relationships, social support, and well-being.

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## III. ENGLISH LONGITUDINAL STUDY OF AGING (ELSA)

The English Longitudinal Study of Ageing (ELSA) is a large, national panel study of English people aged 50 and older. The ELSA was established to study processes of aging from an interdisciplinary perspective. ELSA sample members were selected from households that had participated in the Health Survey for England (HSE), an annual, nationally representative cross-sectional survey. Participants aged 50 and over at the time of the first wave of data collection in 2002 were eligible to become ELSA sample members. ELSA participants are interviewed every 2 years, with an additional nurse visit to collect biomedical data every 4 years.

Three waves of ELSA data have been collected (in 2002, 2004, and 2006) with 12,100 participants in the first wave, and 9,432 participants in the second wave. Third wave data will become available in early 2008 and the fourth wave fieldwork will begin in Spring 2008. The ELSA is funded by the National Institute on Aging in the United States and by a consortium of government departments in the United Kingdom. The ELSA was designed to be comparable with its U.S. counterpart, the Health and Retirement Study (HRS), as well as the Survey of Health Ageing and Retirement in Europe (SHARE). The content of the ELSA includes demographics; health; physical and cognitive function, including performance tests; psychosocial factors and well-being; social participation; housing; employment; pensions and retirement; income, assets, and consumption; biomedical measures, including blood pressure, lung function, anthropometric measures, and blood analyses; and links to administrative data, including mortality statistics. Key findings from the first two waves of the ELSA highlighted diversity and inequality, with extreme differences in the distribution of wealth in the older population and strong links between wealth, health, and social participation (Marmot et al., 2003).

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## IV. HEALTH AND RETIREMENT STUDY (HRS)

The Health and Retirement Study (HRS) is a national longitudinal study of more than 20,000 individuals representing the population over age 50 in the United States. The study began in 1992 with a cohort of then preretirement-age individuals born between 1931 and 1941. New cohorts were added in 1993 and 1998 to round out the sample over age 50, and additional cohorts are enrolled every 6 years (e.g., in 2004, 2010) to refresh

the sample at the younger ages. The study contains oversamples of African Americans and Hispanics. Participants are followed throughout the life course with biennial interviews and supplemental data collections.

The primary focus of the study is on the intersection between health, retirement, and economic status in later life. The survey provides detailed information on these topics, as well as on employment history and pension portfolio, work disability and related benefits, family composition and resource transfers, health insurance coverage, and utilization of health services. Supplemental data collections have focused on special topics such as consumption, prescription drug coverage, diabetes care and management, and dementia. Since 2003 the study has collected periodic measurements of physical performance (e.g., grip strength, walking speed, and so forth), height, weight, waist size, blood pressure, and several biomarkers.

The HRS is the nation's leading resource for data on the health and economic well-being of America's rapidly growing older population. As of early 2008, more than 900 journal articles, books, book chapters, and dissertations have been completed using HRS data. A few selected publications are listed in the bibliography. Key findings from the study are summarized in a recent publication by the National Institute on Aging (2007).

The HRS has been emulated in numerous international studies, including the English Longitudinal Study of Ageing, the Survey of Health, Ageing, and Retirement in Europe, the Mexican Health and Aging Study, the Korean Longitudinal Study on Aging, as well as studies that are underway or will soon be launched in Japan, China, Ireland, and India. This collection of studies provides rich potential for cross-national analysis.

The HRS is conducted by the University of Michigan with primary support from the National Institute on Aging. HRS data products are available without cost to researchers and analysts and may be downloaded from the HRS Web site (see bibliography). The Web site also includes general information about the study, documentation reports, and a searchable bibliography of publications based on HRS data.

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## V. LONGITUDINAL STUDY OF AGING (LSOA)

There are two Longitudinal Studies of Aging, known as LSOA-I and LSOA-II. Both are cohort studies conducted collaboratively by the National Center of Health Statistics (NCHS) and the National Institutes of Health (NIH). The baseline for the LSOA-I was the 1984 Supplement on Aging (SOA) of the National Health and Interview Survey (NHIS). The NHIS is a continuous cross-sectional household survey conducted annually by the NCHS to monitor trends in illness and disability in the United States. The baseline for the LSOA-II was the 1994 Supplement on Aging. LSOA-I has three follow-up waves (1986, 1988, and 1990); LSOA-II has only two (1997 and 2000). Study populations are all non-institutionalized individuals age 70 years old or older at baseline, living in the United States. The surveys used stratified multistage probability sampling designs. Face-to-face interviews were conducted only at baseline and relied on self-reported information, except when proxy respondents were needed. Respondents of follow-up waves were interviewed by phone or mail in LSOA-I, and with a Computer-Assisted Telephone Interview (CATI) system in LSOA-II. Baseline sample sizes were 7,527 subjects in 1984 and 9,447 in 1994 (Kovar, Fitti, and Chyba, 1992; NCHS, 2003). Respondents who became institutionalized were interviewed during the follow-up waves, except in 1986, when these respondents were purposefully excluded. Hence, this wave was based on a subsample of 5,151. This wave was the only one with a special tracking of non-interviewed persons.

Some important differences between the two studies are that baseline interviews were held at the same time as the NHIS interviews in LSOA-I, but not in LSOA-II; LSOA-II oversampled African Americans; and attrition at last wave was larger for LSOA-II (27%) than for LSOA-I (14%).

LSOA datasets have been valuable in studying the oldest-old Americans and include topics such as: functional limitations and disability over time (Crimmins, Saito and Reynolds, 1997; Freedman, Crimmins, Schoeni, Spillman, et al, 2004; Speare, Avery, and Lawton, 1991; Worobey and Angel, 1990), institutionalization and living arrangements (Speare, Avery, and Lawton, 1991; Worobey and Angel, 1990), mortality determinants (Allison, Gallagher, Heo, Pi-Sunyer, et al, 1997; Grabowski and Ellis, 2001; Rakowski and Mor, 1992; Steinbach, 1992), and health services utilization (Wolinsky and Johnson, 1991).

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## VI. SURVEY OF HEALTH AGEING AND RETIREMENT IN EUROPE (SHARE)

The Survey of Health Ageing and Retirement in Europe (SHARE) is a longitudinal, multidisciplinary, and cross-national database of representative micro data on health, socioeconomic status, and social or family networks of individuals aged 50 and over. Eleven countries contributed to the approximately 30,000 computer-assisted personal interviews conducted during the 2004 SHARE baseline wave. These countries constitute a balanced representation of Continental Europe's regions, ranging from Scandinavia (Denmark and Sweden) through Central Europe (Austria, France, Germany, Switzerland, Belgium, and the Netherlands) to the Mediterranean (Spain, Italy, and Greece). In 2005 and 2006, SHARE data also were collected in Israel. For the second wave of data collection, which was conducted in 2006 and 2007, three additional European Union (EU) member states—the Czech Republic, Ireland, and Poland—joined the SHARE. The survey's third wave, which is scheduled for 2008 and 2009, will focus on the collection of detailed life histories of respondents who participated in previous waves.

The SHARE was modeled after the Health and Retirement Study (HRS) in the United States, and the English Longitudinal Study of Ageing (ELSA). A unique strength of the SHARE is that the data can be used to explore cross-national variations in public policies, cultures, and histories in a variety of European countries. Its measures include health (e.g., self-reported health, physical and cognitive functioning, health behavior, and health care utilization), psychological (e.g., mental health and quality of life), economic (current work situation and job characteristics, sources and composition of current income, wealth, and consumption), and social support (e.g., instrumental help, financial transfers, and volunteer activities) indicators.

The SHARE project is coordinated centrally at the Mannheim Research Institute for the Economics of Aging in Germany. Detailed documentation as well as information on SHARE-based publications is available

on the project's Web site. All researchers may download the SHARE data free of charge.

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## VII. WISCONSIN LONGITUDINAL STUDY (WLS)

The Wisconsin Longitudinal Study (WLS) is a long-term study of a random sample of 10,317 men and women who graduated from Wisconsin high schools in 1957 and of their randomly selected brothers and sisters. Survey data were collected from the graduates or their parents in 1957, 1964, 1975, 1992, and 2004; from a selected sibling in 1977, 1994, and 2005; from the spouse of the original respondent in 2004; from the spouse of the selected sibling in 2006; and from widow(er)s of the graduates and siblings in 2006. The data provide information about: family background; youthful aspirations; schooling; military service; occupational histories and job characteristics; income, assets, and interhousehold transfers; health insurance, access to health care; pension coverage; family formation and relationships among family members; mental and physical health; stressful life events; coping behavior; cognitive functioning; social and civic participation; experiences with the early death, severe mental illness, or disability of a child; and medical, legal, religious, and psychological preparation for the end of life. Many of these measures are repeated across time.

Along with survey data, the WLS has a variety of supplemental data such as mental ability tests and measures of school performance; characteristics of communities of residence, schools and colleges, employers, and industries; information from high school yearbooks; and samples of DNA from both the graduate and the sibling. In-home interviews with the original respondents are planned for 2010. All nonidentifying WLS data are publicly available and most restricted data can be made available to researchers on completion of an application. Data, documentation, and publications are available online at www.ssc.wisc.edu/wlsresearch. The WLS has been supported principally by the National Institute on Aging with additional support from the Vilas Estate Trust, the National Science Foundation, the Spencer Foundation, and the Graduate School of the University of Wisconsin-Madison. The WLS data have been used to study important life course issues, such as inter- and intragenerational social mobility, and were the basis for influential "status attainment model" (Sewell & Hauser, 1975).

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# DEAFNESS

**SEE** Volume 3: *Sensory Impairments.*

# DEATH AND DYING

Dying is considered the final stage in the life course, and death is the final life course transition. As such, life course sociologists study the ways that values, beliefs, behaviors, and institutional arrangements concerning death are structured by social environments and contexts. Death is a universal human experience, yet societal responses to death vary according to cultural attitudes toward death, contextual factors including the primary causes of death, and normative age at which death occurs. Although death can occur at any point in the life course, the vast majority of all deaths in the early 21st century occur to older adults. In 2006 nearly three-quarters of the 2.4 million deaths in the United States were deaths to persons ages 65 and older (Centers for Disease Control, 2006).

## HISTORICAL CHANGES IN DEATH PRACTICES

Beliefs and practices surrounding death in the United States have come full circle over the past three centuries. In the 18th century, death was public and visible. Death tended to occur at a relatively young age, at home, and was caused by infectious diseases that could not be cured. The loss of a loved one was expressed by dramatic displays of grief among survivors, and elaborate efforts to memorialize the deceased (Aries, 1981). Throughout the late 19th and most of the 20th century, death became "invisible" (Aries, 1981) and "bureaucratized" (Blauner, 1966). Physicians and hospitals assumed control over dying, death and mourning became private, the handling of dead bodies and funeral rites were transferred from private homes to funeral parlors, and people were encouraged to deny death and believe in medical technologies (Blauner, 1966). Treating dying persons in isolation was believed to help smooth the transition beyond death; reducing the social status of those who were about to die would minimize disruption of ongoing social and economic relationships.

The epidemiology of death also changed dramatically (Omran, 1971). In the 19th and early 20th centuries deaths occurred primarily due to infectious diseases, which were not stratified by social class or gender. Men and women, rich and poor were equally likely to become ill and die, and death often occurred relatively quickly after the initial onset of symptoms. Death during the latter half of the 20th and early 21st centuries, in contrast, occurs overwhelmingly due to chronic diseases, including cancer and heart disease. These diseases tend to strike older rather than younger adults, men more so than women, and persons with fewer rather than richer economic resources. Death typically occurs in late life at the end of a long, often debilitating, and painful illness where the dying patients' final days are spent in a hospital or nursing home, and life-sustaining technologies are used.

In the late 20th and early 21st centuries, death is again becoming visible and managed by the dying and their families. Patients' and care providers' recognition that dying is often a socially isolated, physician-controlled experience has triggered a number of political and social movements with the explicit goal of placing control of the dying process in the hands of patients and their families. The Patient Self-Determination Act, passed by Congress in 1990, requires all government-funded health providers to give patients the opportunity to complete an advance directive (or living will) when they are admitted to a hospital. The hospice movement, which began in the United States in the early 1970s to promote palliative care at the end of life, also has grown in popularity. Hospice care, whether in-hospital or at-home, provides an alternative to the medical, scientific model of dying. Pain management, open communication among family, patient, and care providers, and a peacefully accepted death are core goals (National Hospice and Palliative Care Organization, 2001).

## IMPORTANT SOCIOLOGICAL STUDIES OF DEATH

As the social context of death and dying has changed, the foci of research also have shifted. In the 1950s and early 1960s, research was guided by the assumption that the United States was a death-denying society (Gorer, 1965). Influential works included an examination of the problems associated with transferring death and funeral rites from private homes to professional funeral homes (Mitford, 1963), and explorations of the ways that health care providers, dying patients, and their family members mutually ignore and shield one another from their knowledge that the patient is dying (Glaser & Straus, 1965).

In the late 1960s and 1970s, the *death awareness* movement guided research and theory. Key scholarly works of this era offered important advancements in conceptualizing the dying process. Barney Glaser and Anselm Strauss (1968) proposed that dying tends to follow one of three trajectories: lingering, expected quick, and unexpected quick. The latter was considered most distressing for both health care providers and surviving family members. Elizabeth Kübler-Ross (1969) delineated the emotional and cognitive stages that dying persons pass through, before reaching the final stage of *acceptance*.

In the late 20th and early 21st centuries, research on death and dying has flourished. (For a comprehensive compendium, please see Clifton Bryant's *Handbook of Death and Dying* [2003].) Scholarly and public concern about death reflects two broad social patterns. First,

| All races | White | Black | Asian or Pacific Islander | American Indian | Hispanic |
|---|---|---|---|---|---|
| 1 Diseases of heart | Diseases of heart | Diseases of heart | Diseases of heart | Diseases of heart | Diseases of heart |
| 2 Malignant neoplasms | Malignant neoplasms | Malignant neoplasms | Malignant neoplasms | Malignant neoplasms | Malignant neoplasms |
| 3 Cerebrovascular diseases | Cerebrovascular diseases | Cerebrovascular diseases | Cerebrovascular diseases | Cerebrovascular diseases | Cerebrovascular diseases |
| 4 Chronic lower respiratory diseases | Chronic lower respiratory diseases | Diabetes mellitus | Diabetes mellitus | Diabetes mellitus | Diabetes mellitus |
| 5 Alzheimer's disease | Alzheimer's disease | Nephritis | Influenza and pneumonia | Chronic lower respiratory diseases | Alzheimer's disease |

***Figure 1.*** *Leading causes of death among women age 65 and over, by sex, race, and origin, 2004.* CENGAGE LEARNING, GALE.

increasingly large numbers of older adults are living longer than ever before, with most suffering from at least one chronic and terminal disease at the end of life. At the same time, the expanding population of older adults is experiencing the deaths of spouses, siblings, and friends in large numbers. Second, technological innovations to extend life, including life-support systems, organ transplants, and advances in cancer treatment extend the life span, but also raise important questions about the meaning of life and death.

## CONTROL OVER THE DYING PROCESS

One broad theme of the life course paradigm underlies much current research on death: the importance of personal control and agency, both among dying persons and their survivors. Two specific lines of inquiry, which have developed since the late 1990s, are personal control over practical aspects of the dying process and active *meaning making* among the dying and bereaved.

Mounting research explores how older dying persons and their families make decisions about the type, site, and duration of care they want to receive at the end of life. Sociologists' key contributions have included identifying the cognitive, emotional, and structural factors that may enable or prevent individuals from receiving the type of care they hope to receive. Recent research reveals that patients and their family members seldom have sufficient information about their illness trajectory and future lifespan so that they can make informed decisions. Nicholas Christakis (1999) argues that physicians are extremely poor at prognosis, or projecting how much longer a dying patient has to live, and they often convey an unrealistically optimistic picture of their patient's future.

## MEANING MAKING

A second area of inquiry that has attracted renewed scholarly attention is *meaning making*, both among the dying and their loved ones following loss. This concept was first set forth in *Death and Identity*, where Robert Fulton (1965) argued that preserving, rather than losing, personal identity was a critical aspect of the dying process. Sociologist Victor Marshall (1980) proposed that heightened awareness of one's impending death triggers increased self-reflection, reminiscence, and the conscious construction of a coherent personal history. Similarly, developmental theorist Erik Erikson (1902–1994) proposed that preparation for death is the key developmental challenge for older adults. Older adults must simultaneously balance their fear of death and loss, with a heightened capacity for finding meaning in life. More recently, Edwin Shneidman (1995) proposed that dying persons actively construct a post self, or a lasting image of the self that will persist after one's death.

The ways that bereaved survivors actively find meaning in death was articulated early on by Herman Feifel, who observed that the mourning period following loss provides a time for the bereaved to "redefine and integrate oneself into life" (1990, p. 9). Current research explores the ways that active meaning making among the newly bereaved helps to reestablish predictability and one's sense of security. Other goals for the bereaved include personal growth, an adaptive broadening of philosophical perspectives, and an increased appreciation of other interpersonal relations.

## RESEARCH CHALLENGES

Scholars of death and dying face several important methodological challenges. First, bereavement research focuses nearly exclusively on the loss of a spouse, children, and

| All races | White | Black | Asian or Pacific Islander | American Indian | Hispanic |
|---|---|---|---|---|---|
| 1 Diseases of heart | Diseases of heart | Diseases of heart | Diseases of heart | Diseases of heart | Diseases of heart |
| 2 Malignant neoplasms | Malignant neoplasms | Malignant neoplasms | Malignant neoplasms | Malignant neoplasms | Malignant neoplasms |
| 3 Chronic lower respiratory diseases | Chronic lower respiratory diseases | Cerebrovascular diseases | Cerebrovascular diseases | Cerebrovascular diseases | Cerebrovascular diseases |
| 4 Cerebrovascular diseases | Cerebrovascular diseases | Diabetes mellitus | Chronic lower respiratory diseases | Diabetes mellitus | Diabetes mellitus |
| 5 Diabetes mellitus | Influenza and pneumonia | Chronic lower respiratory diseases | Influenza and pneumonia | Chronic lower respiratory diseases | Chronic lower respiratory diseases |

***Figure 2.*** *Leading causes of death among men age 65 and over, by sex, race, and origin, 2004.* CENGAGE LEARNING, GALE.

parents; few studies investigate personal responses to the deaths of friends, siblings, or unmarried romantic partners (including gay and lesbian partners) in later life. Life course scholars recognize the importance of *linked lives*, underscoring the value of exploring bereavement across multiple relationships. A further limitation is that studies vary widely in their definition of *dying*. Common measures to define it include one's current illness diagnosis, combinations of diagnoses, symptom expression, and functional capacity (George, 2002). Finally, although most conceptual models of the dying process and bereavement are dynamic, such as the stage theory of dying (Kübler-Ross, 1969), most empirical studies still rely on single point-in-time evaluations that retrospectively recall the dying and bereavement process.

## FUTURE DIRECTIONS

In the future, research may focus increasingly on positive aspects of dying, including psychological resilience in the face of loss, and the characteristics of and pathways to a good death. Important research goals include pinpointing modifiable factors of social contexts and relationships that may help ensure a smooth transition to death and bereavement. Early theories of loss proposed that persons who were not depressed following the loss of a loved one were pathological. Researchers now are documenting that the non-depressed bereaved may experience "resilience" rather than pathological "absent grief" (Bonanno, 2004).

Research on the good death also is accumulating. A *good death* is characterized as one where medical treatments minimize avoidable pain and matches patients' and family members' preferences. A good death also encompasses important social, psychological, and philosophical elements, such as accepting one's impending death and not feeling like a burden to loved ones. As norms for a good death are solidified, a fruitful line of inquiry may be the consequences for bereaved family members and health care providers when a death occurs under conditions that fail to meet the widely accepted ideal. Failure to achieve the good death may reflect enduring social and structural obstacles. Family member (or caregiver) involvement is essential to a patient's participation in hospice; few studies have explored the extent to which unmarried or childless older adults rely on hospice. Such inquiries may further reveal the ways that the experience of death reflects persistent social inequalities and diverse sociohistorical contexts.

**SEE ALSO** Volume 3: *Hospice and Palliative Care; Life Expectancy; Mortality; Suicide, Later Life.*

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## DEMENTIAS

*Dementia* is a broad term referring to a syndrome that involves cognitive decline that is sufficiently severe to interfere with an individual's daily functioning. Dementia may encompass a variety of symptoms, including impairment in memory, communication, or personality change, that have a variety of causes (e.g., Alzheimer's disease [AD], cerebrovascular disease, and so forth). Dementia is the behavioral and cognitive expression of an underlying disease process that is causing damage to the brain. For example, AD involves one set of specific brain alterations that lead to a dementia syndrome characterized by severe declines in memory. As AD pathology spreads throughout the brain, additional cognitive, behavioral, and emotional capacities are disrupted. This entry describes several types of dementia including their underlying brain damage, clinical presentation, prevalence, progression, and the extent to which rates of these dementias differ by ethnicity, sex, and geographic region.

Although AD is the most well-known cause of dementia, there are several other pathologies that result in similar symptoms. In general, the dementias are most distinct from one another in the early stages. However, as dementia progresses, the underlying brain damage is more severe and widespread. As a result, more severe dementia involves damage to multiple brain regions and greater impairment in multiple cognitive and behavioral functions. Thus, it is increasingly difficult to find distinctiveness among specific types of dementia as the syndrome progresses over time. An additional source of commonality across types of dementia comes from their overlap in terms of underlying pathology. For example, it is relatively common for individuals to have multiple dementia pathologies, such as both AD and cerebrovascular changes. As a result, some medical experts have advocated a shift in the conceptualization of the various forms of dementia toward the underlying neuropathology rather than the clinical expression of symptoms (Ritchie & Lovestone, 2002). With this distinction in mind, this entry will focus on both the underlying pathology and the expression of symptoms of four types of dementia in their early forms (see Table 1), when their behavioral and cognitive expression is most distinct.

| Symptom | Type of Dementia |
|---|---|
| Memory loss for recent information | AD, VD, LBD, FTD |
| Difficulty performing familiar tasks | AD |
| Difficulties with language and communication | AD, LBD, VD, FTD |
| Disorientation to time and place | AD, LBD, VD |
| Poor or decreased judgment | AD, LBD |
| Misplacing things, especially in unusual places | AD |
| Changes in mood or behavior | AD, LBD, VD, FTD |
| Changes in personality | AD, FTD |
| Difficulty following directions | AD, LBD, VD |
| Recurrent visual hallucinations | LBD |
| Loss of initiative, apathy or unwillingness to talk | AD, VD, FTD |

Note: AD, Alzheimer's disease; VD, vascular dementia; LBD, Lewy body dementia; FTD frontotemporal dementia.

***Table 1.*** *Expression of symptoms of four types of dementia in their early forms.* CENGAGE LEARNING, GALE.

## ALZHEIMER'S DISEASE

AD is the most common and most extensively researched form of dementia, and, as a result, it is treated as the prototypical dementia used to define the broader syndrome itself. Recent estimates suggest that approximately 4.5 million individuals in the United States have AD, and that by the year 2050 this number will grow to more than 13 million with the greatest growth occurring among those over the age of 85 years (Hebert, Beckett, Scherr, & Evans, 2001). The prevalence of AD increases substantially with age. AD is present in roughly 1–1.5% of those in their early 60s (Ritchie & Lovestone, 2002) and in up to 30% among those 80 to 85 years (Blennow, de Leon, & Zetterberg, 2006).

The hallmark neuropathological changes of AD include (a) plaques, which build up between nerve cells and contain deposits of protein fragments; (b) neurofibrillary tangles, which form inside the dying cells and are composed of a protein called tau; and (c) shrinkage of the brain. These changes are initially present in the medial temporal lobes, particularly the hippocampus and related structures, but eventually spread to other regions of the brain, most notably the frontal and parietal lobes. In early AD, these changes are associated with impairment in memory for recent events, names, and locations, but additional changes are observed as the syndrome progresses, including the inability to name common objects, poor judgment, problems with planning and problem-solving, and difficulty with visual-spatial functioning. AD is characterized by a gradual onset and progressive decline. AD can currently only be confirmed by neuropathological evidence (i.e., autopsy); therefore the clinical diagnosis of AD must be considered either possible or probable while the person is still living.

## VASCULAR DEMENTIA

Vascular dementia (VaD) has traditionally been regarded as the second most common form of dementia in late life. Diagnosis requires (a) presence of dementia, or severe cognitive impairment; (b) evidence of cerebrovascular disease such as a stroke; and (c) a temporal connection between the presence of cerebrovascular disease and the onset of dementia. VaD is less homogeneous in its behavioral and cognitive expression than AD because the underlying brain pathology can occur in a variety of locations due to either chronic cerebral ischemia, acute stroke (large or small vessel), or insufficient blood flow to the brain due to hypotensive episodes (O'Brien, 2006; O'Brien et al., 2003). Traditionally, VaD was thought to have a stepwise decline (as opposed to the gradual decline of AD) in which periods of relatively stable functioning were followed by abrupt decrements in function associated with a new vascular event, such as a heart attack or stroke. More recent evidence has suggested that VaD may follow a more progressive course, similar to that of AD (Pedelty & Nyenhuis, 2006). One possible explanation is the considerable overlap between AD and VaD pathology. Many individuals who were clinically diagnosed with VaD demonstrate evidence of both cerebrovascular disease and AD on autopsy, and vascular risk factors appear to place individuals at risk for both VaD and AD. Although the expression of VaD is heterogeneous, it has generally been associated with greater problems with attention, executive functioning that is necessary for tasks such as planning and problem-solving, and slower processing speed in the early stages. VaD is likely to be accompanied by depression and apathy in many cases.

## DEMENTIA WITH LEWY BODIES

Dementia with Lewy bodies (DLB) is becoming increasingly recognized clinically, and some research indicates that DLB may in fact be the second most common type of dementia, representing up to 10–15% of dementia cases (McKeith et al., 1996). DLB is a progressive form of dementia accompanied by the extrapyramidal signs of Parkinson's disease, which are associated with movement (e.g., rigidity, changes in gait, falls, and so forth). Lewy bodies, the underlying pathology, are accumulations of abnormal protein deposits within neurons located in the brain stem, limbic system, and cerebral cortex. Lewy bodies appear to disrupt dopaminergic and cholinergic systems, which play key roles in motor and cognitive functioning (Hou, Carlin, & Miller, 2004). The most prominent clinical symptoms are parkinsonism, fluctuating cognition, and visual hallucinations. Problems with executive functioning and visual-spatial functioning have also been observed in DLB, but memory is relatively spared when compared with AD. DLB has a progression rate similar to that of AD, but may be associated with greater impairment in activities of daily living and greater mortality risk when compared to AD.

## FRONTOTEMPORAL DEMENTIA

Frontotemporal dementia (FTD) is a broad class of dementias characterized by atrophy of the frontal and anterior temporal lobes. These dementias present clinically in several different forms including prominent personality changes or progressive changes in language depending on the region of the brain that is most affected. The frontal variant FTD is characterized by noticeable personality changes, particularly impulsive, disinhibited behavior or apathy and problems with executive functioning. In comparison to AD, memory is relatively preserved. FTD has a gradual and relatively early onset (often younger than 65 years) and is considered to be progressive. Primary progressive aphasia and semantic dementia are related syndromes that fall under

the same general category of dementias associated with frontotemporal lobar degeneration, but which differ in that they primarily affect language and communication skills (Neary et al., 2005; Hou et al., 2004).

## RATES OF DEMENTIA BY ETHNICITY, SEX, AND GEOGRAPHIC REGION

The results from research concerning dementia prevalence rates by ethnicity, sex, and global region has been somewhat mixed and additional research is needed to clarify (a) the extent to which the prevalence of dementia varies as a function of these characteristics, and (b) what factors explain any differences that might exist. Highlighted below are several trends observed in the literature, but the reader is advised to consider these to be provisional findings pending additional research. The vast majority of this research has focused on either dementia in general (not specific to type), AD, and, to a lesser extent, VaD. Very little research has addressed prevalence differences in DLB and FTD along these dimensions.

**Ethnicity and Dementia Prevalence** Research suggests that in the United States, African Americans have higher rates of dementia than European Americans (Froehlich, Bogardus, Jr., & Inouye, 2001) although some studies have not found significant differences (Fillenbaum et al., 1998). In relation to specific dementia types, results have been mixed, but some studies suggest that African Americans have AD incidence rates twice those found for European Americans (Evans et al., 2003; Tang et al., 2001). VaD may be more common than AD among African Americans (Froehlich et al., 2001) and this finding has been attributed to high rates of stroke, diabetes, and hypertension among African Americans. However, although there may be differences between ethnic groups in terms of the prevalence of dementia, it is not yet clear whether these reflect true differences in the prevalence of dementia or whether these differences reflect problems with the methods used to detect and diagnose dementia in minority samples. For example, considerable research has documented a relatively high rate of false positives among minority elders, particularly in Hispanic and African-American populations (Fillenbaum, Heyman, Williams, Prosnitz, & Burchett, 1990). In other words, some of the cognitive tests used to identify cognitive impairment (the core feature of dementia) may misclassify some minority elders, potentially leading to overdiagnosis of dementia in these populations.

**Gender Differences in Dementia** Current research suggests that women have a greater prevalence of dementia in general and AD in particular (Baum, 2005). However, because age is the strongest risk factor for dementia and AD, the greater prevalence of dementia may be partially attributable to well-established differences in survival and longevity between men and women. In fact, one comprehensive review of incident dementia research reported minimal differences between men and women. Women had slightly greater risk for AD in the oldest age groups, but men had greater risk for VaD in younger age groups (Jorm & Jolley, 1998). Still other research has shown that gender is not associated with age of onset in AD, incidence of AD or dementia, or risk for developing dementia (Edland, Rocca, Peterson, Cha, & Kokmen, 2002). These conflicting findings point to the need for more research addressing gender differences in dementia, particularly in relation to incidence, and the genetic and environmental factors that contribute to the development of dementia in men and women.

**Cross-national Comparisons of Dementia Prevalence** In addition to differences by race and gender within countries, additional research has examined differences in the rates of dementia across countries and regions of the world. Over the years dementia research on a global scale has found differences in prevalence by country, region, and ethnicity, but research has not progressed sufficiently to provide stable estimates for all regions of the world. An expert panel convened in 2005 to review all available epidemiological evidence concerning prevalence of dementia on a global scale (Ferri et al., 2005). Using World Health Organization (WHO) regions, they determined that outside of North America, Western Europe, and certain western Pacific countries (especially Japan and Australia), there were not sufficient data to estimate the prevalence of dementia with confidence. Using available data, they estimated that developed nations have higher age-adjusted prevalence rates of dementia than developing nations. The lowest rates of dementia were in African and Southeast Asia. Western Pacific, Latin American, and eastern European countries had higher rates than Africa and Southeast Asia, but lower than Western Europe and North American countries.

Results concerning disparities in prevalence of specific types of dementia throughout the world have been even less clear. Throughout the 1980s and 1990s, most studies showed a preponderance of VaD cases over AD cases in Asian countries (Shibayama, Kasahara, & Kobayashi, 1986; Jorm, Korten, & Henderson, 1987; Larson & Imai, 1996). However, more recent research demonstrates that AD has become the most common dementia-related diagnosis in most countries around the world. In a study conducted in Japan, AD accounted for 55% of all dementia cases, whereas VaD only accounted for 26% (Yamada, Hattori, Miura, Tanabe, & Yamori, 2001). A similar study from China found rates of 55% and 37.5% for AD and VaD, respectively (Li

et al., 2007). The prevalence of AD is even higher in the United States and most of Europe, where it has been reported to account for 76.9–90% of incident dementia cases in people over the age of 65 (Ganguli, Dodge, Chen, Belle, & DeKosky, 2000). Despite the overwhelming prevalence of AD, one study examining Cree Native Americans over the age of 65 found a prevalence rate of 4.2% for all dementias, but only 0.5% for AD (Hendrie et al., 1993). In Africa the demarcations between different types of dementia have been less obvious, though one study examining an elderly Egyptian sample found that AD accounted for 53% of dementia cases (Ineichen, 2000).

Although there is some uncertainty regarding differences in the prevalence of dementia worldwide, there is even less certainty regarding why these apparent differences might occur. These differences may be due to measurement issues (definitions of dementia and the measurement tools designed to detect them) or to sociocultural differences that affect the reporting of dementia. Many of the tests used to screen for dementia may not be equally effective among different cultures, as demonstrated by high false positives found in minority samples (Gurland, Wilder, Cross, Teresi, & Barrett, 1992). Variation could also be due to properties of the screening tests used, the definition of dementia used, lack of standardization of test administration procedures, biases, and differences in literacy of studied populations (Kukull & Ganguli, 2000). Cultural style of education may also affect scores on dementia screening measures. It is nearly impossible to construct a test that is entirely culture-free. Every test that is created will reflect to some extent the culture in which it was constructed, and its questions may have slightly different meanings for people from other cultures.

Prevalence estimates for developing countries may be lower because of underreporting and lower life expectancy. Dementia could be unreported in some countries because of its stigmatization in certain cultures, and the fact that families in some developing countries may tolerate a wider range of behavior considered to be abnormal by Western standards. Moreover, some of these families may seek help from local healers rather than consult Western doctors.

Despite these challenges with cross-cultural dementia research, there is some evidence to suggest that environmental factors may contribute to legitimate differences in the prevalence of dementia. For example, a study examining elderly Japanese Americans living in Hawaii found prevalence estimates of 9.3% for dementia and 5.4% for AD, which more closely resemble those found for European-American samples as opposed to older adults living in Japan (White et al., 1996). A similar study looking at elderly Japanese adults living in Washington state found an AD prevalence of 14% in people between the ages of 85 and 89, a figure that more closely resembles those found for European-American samples than those found in Asia (Graves et al., 1996). A study comparing an elderly sample from Ibadan, Nigeria, with a matched African-American sample from Indianapolis, Indiana, found dementia rates of 2.29% and 8.24% respectively, indicating that people of African decent living in the United States have dementia rates more similar to those found for European Americans than for elders living in Africa (Ogunniyi et al., 2000). Taken together, these findings seem to suggest that environmental characteristics specific to different geographical regions may play a role in the prevalence of AD and other dementias. Collectively these results highlight the need for further research directed toward identifying these factors.

There is also some evidence suggesting that ApoE4 allele may contribute to potential genetic influences on regional dementia differences. ApoE4 is a gene carried by 20–25% of the population and is known to increase risk for developing AD. In the Nigerian study described above, no association was found between possession of the ApoE4 allele and AD, though a significant association was found for the African-American sample (Ogunniyi et al., 2000). A different study comparing American citizens of different ethnicities presents somewhat conflicting results, as authors found that the presence of the ApoE4 allele was a strong risk factor for AD in European Americans, an intermediate risk factor for Hispanic Americans, and not a risk factor for African Americans (Larson & Imai, 1996). Moreover, some have suggested that the lower incidence of AD in Japanese populations may be related to a lower prevalence of the ApoE4 allele (Jorm & Jolley, 1998). The presence of one or more ApoE4 alleles may increase vulnerability to develop AD, but research examining different populations suggests that the extent to which this occurs may function differently between different ethnic and cultural groups. These conflicting, yet intriguing, findings clearly indicate that more research is warranted on the subject of genetic factors that affect the development of AD and dementia. Future research for policy, practice, screening, and interventions should acknowledge differences in the influence of ApoE4 on different populations.

**SEE ALSO** Volume 3: *Aging; Cognitive Functioning and Decline; Genetic Influences, Later Life; Mental Health, Later Life.*

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# DEMOGRAPHIC TRANSITION THEORIES

Social scientists have identified two main demographic transitions. The first or "classic" demographic transition refers to the historical declines in mortality and fertility, as witnessed from the 18th century onward in several European populations, and continuing at present in most developing countries. The end point of the first demographic transition (FDT) was supposed to be an older stationary population (i.e., a population that has an even distribution of age groups), with replacement fertility (i.e., just over two children on average), growth rates oscillating around zero (i.e., the total population size is stable), and life expectancies higher than 70 years. At this stage of the demographic transition, there is a balance between deaths and births, and thus populations would not require sustained immigration for their continuation and growth. Moreover, households in all parts of the world would converge toward the nuclear and conjugal types, composed of married couples and their offspring.

The second demographic transition (SDT), by contrast, sees no such equilibrium as the end point. Rather, a shift in values and tastes brings new developments in the form of sustained below-replacement fertility, a multitude of living arrangements other than marriage, the disconnection between marriage and procreation, and no stationary population. Under these conditions, populations would decline in size if not complemented by new migrants (i.e., "replacement migration"), and they will also be much older than envisaged in the FDT model as a result of lower fertility and additional gains in longevity. Migration streams will not be capable of stemming the aging of national populations but will merely stabilize population sizes. On the whole, the SDT brings new social challenges, including those associated with populations that have disproportionately large numbers of older persons, less stability of households, and higher levels of poverty or exclusion among certain household types (e.g., single persons of all ages, single mothers) and that are dealing with the integration of immigrants and other cultures.

## THE FIRST DEMOGRAPHIC TRANSITION

A typical description of the FDT is that it is an irreversible process of change from a demographic regime with high death rates and high birth rates to a stable regime with low birth and death rates. Moreover, such a change is considered typical for societies that move from a preindustrial to an industrialized economy.

**The Origins of the Concept** The concept of the demographic transition has a long history. In 1890 the French demographer Arsène Dumont (1849–1902) explained the onset of the European fertility decline as an indication of "social capillarity"—that is, the process whereby individuals aspire to upward social mobility. As a result, parents project this aspiration onto their children, invest in their education, and thus place a greater emphasis on the "quality" rather than the "quantity" of their offspring. A century later, economists would call this the "quantity–quality shift." The notion of a systemic demographic transition with distinct phases can be traced to two scientists: the American sociologist Warren S. Thompson (1887–1973) and the French demographer and economist Adolphe Landry (1874–1956).

Thompson developed a three-category typology of nations, based on growth rates. The first group includes populations with low growth rates that had made it through the mortality and fertility declines, and these populations would be on the way to a stationary path or even a declining one. This category comprised the northern and western European countries and the nations settled by European immigrants (e.g., the United States, Canada). The second group consisted of populations where the death rates had fallen but where fertility rates were still high—resulting in high population growth rates. This group comprised southern and eastern European populations. The third group was made up of pretransitional or "Malthusian" populations (referring to Thomas Robert Malthus [1766–1834], the influential English demographer who believed population growth would be limited by resource availability). Countries in this third group had not experienced any of these changes in birth and death rates. Thompson was often pessimistic about the final outcome of the demographic transition given the political and economic problems that such an unequal timing of the transition would produce, but he has the merit of presenting the transition as a global ongoing process.

In 1934 Landry published *La Révolution Démographique*, in which he proposed essentially the same ideas as Thompson, although he did so independently. He also predicted a stationary or declining population for those countries that are in the vanguard of the FDT but also theorized that countries that experience the transition at a later point in history would go through the transition much faster than their predecessors. Landry also provided a much more elaborate account of the reasons for the declines in mortality and fertility.

Neither Thompson nor Landry used the term *demographic transition*, however. The American demographers Frank W. Notestein (1902–1983) and Kingsley Davis (1908–1997) coined the term immediately after World War II.

**The FDT and Economic Development** A core assumption of FDT theory is that the transition follows a period

of economic development, marked by specific factors such as urbanization, industrialization, rising real incomes, and increased literacy rates. Another core assumption is that the fertility decline is triggered by a reduction in infant and childhood mortality. Empirical research generated after World War II investigated both of these assumptions by focusing on both industrialized and developing countries. The link between economic development and fertility decline became not only the subject of academic investigation but also the focus of heated political debate. Against the backdrop of a worldwide population explosion in the 1960s and 1970s, "economic developers" and "family planners" debated the primary impetus for fertility declines. The former advocated economic development as the most effective path to fertility reductions, whereas the latter argued that the availability and diffusion of modern contraceptive methods was the answer. To this day, political leaders in developing countries have adopted policies and practices consistent with the family planner model.

During the 1960s and 1970s, tremendous scientific strides were made as well. Among the most notable studies of the FDT were (a) a historical examination of population change in Europe, led by researchers at the Office of Population Research at Princeton University, and (b) the World Fertility Survey, an innovative multination survey of fertility and family formation in developing nations. Both studies amassed large amounts of data and information; analyses of these data played a critical role in reshaping theories about the FDT.

**Institutional and Cultural Factors** In the historical European investigation, or the "Princeton project," researchers reconstructed marriage patterns and marital fertility transitions in all European provinces, from Gibraltar to the Urals. A key finding of the study was that modernization across a broad range of geographic regions only very loosely followed the lines of classic transition theory. Rather, the researchers found a vast number of exceptions, including, for instance, rural areas that experienced the FDT before urban or industrial ones, or areas where fertility declines preceded (rather than resulted from) decreases in childhood mortality. Many areas in France started the control of marital fertility as early as the 18th century, a time when real incomes were declining, mortality rates were not improving, and industrialization had not yet occurred. By contrast, England, the industrial pioneer in Europe, started its marital fertility decline only around 1880—nearly a full century after its initial spell of urban and industrial growth.

Perhaps the most surprising and important finding of the study was that economic factors played a modest and inconsistent role in fertility decline and that a previously overlooked serious series of factors—cultural conditions—were a powerful influence on fertility. For example, language differences emerged as powerful barriers in the widespread acceptance of contraceptive behavior and parity-specific (or rank-specific) fertility control. Put simply, the fertility norms of one region spread or "diffused" most easily to regions that shared a native tongue.

The pace at which demographic modernization occurred also varied widely based on the level of religiosity in a given region, regardless of whether that region was largely Protestant or Catholic. Secular areas that would vote for nonreligious political parties were very often the ones that took the lead in fertility control, and this link proved to be quite robust even when the region's socioeconomic and other demographic characteristics were controlled (e.g., Lesthaeghe & Wilson, 1986). Researchers on the Princeton project also documented the importance of the nuptiality (or marriage) transition for understanding the fertility transition. Specifically, they documented how a pattern of late and nonuniversal marriage in western and northern Europe, also known as the Malthusian marriage pattern, gradually gave way to much younger ages at first marriage and to smaller proportions remaining unmarried (and thus celibate). As a result of this transition in marriage patterns, the overall fertility decline could be broken down into two components referring, respectively, to the modernization of the marriage and marital fertility regimes (see Coale, 1969).

The general conclusion of the Princeton project was that fertility changes were not wholly determined by economic conditions. Rather, a broad array of cultural, religious, and social forces shaped societal-level fertility transitions. The project's findings led the demographer Ansley J. Coale (1973) to reformulate FDT theory. Coale proposed that three preconditions must *all* be satisfied before a fertility transition can occur:

1. *The readiness condition*. The new form of behavior (i.e., adoption of contraception) must have economic advantages for the couple and their already born children.
2. *The willingness condition*. The new form of behavior must be ethically or morally acceptable and not in conflict with one's religious convictions.
3. *The ability condition*. Couples must have access to sufficiently efficient and safe means to accomplish the goal of controlling their number of offspring.

Coale's conditions are commonly referred to as the "ready, willing, and able" model. If any fewer than the three conditions are satisfied simultaneously, then the fertility transition will be delayed. Coale's model adopts a much more holistic approach than the standard FDT, as his model integrates economic and noneconomic factors

associated with readiness and willingness, respectively. He also emphasized the importance of the ability factor, which later became known as the family planning effort dimension in less developed countries (see Robinson & Ross, 2007).

A second major collection of studies sprung up around the World Fertility Surveys (WFS), conducted in the 1970s and 1980s in many developing countries. The surveys measured levels of fertility, infant and childhood mortality, and knowledge and use of contraception across many countries. The WFS went beyond these classic demographic topics and also obtained information about "intermediate fertility variables" (Bongaarts, 1978), or those factors that indirectly affect fertility, such as age at first marriage, length of time one breastfeeds, and incidence of contraceptive failures or nonuse (see the concept of "unmet need," Westoff & Ochoa, 1991). Each of these intermediate variables is related to socioeconomic and cultural indicators such as urbanization, literacy levels, gender relations and female empowerment, media penetration and exposure, religious beliefs, existence of consensual unions or polygyny, local networks, and family planning program organization characteristics.

Studies based on the WFS data revealed that many diverse paths may lead to a fertility transition and that all factors related to the "ready, willing, and able" trio were of significance. Moreover, not only individual characteristics but also those at the village or neighborhood level, along with broader patterns of social organization, mattered as significant factors in shaping the fertility and nuptiality transitions. The WFS led to the creation and implementation of the Demographic and Health Surveys, which also obtained information on health and health practices and access to contraception

Data from the Demographic and Health Surveys reveal that the vast majority of developing countries have either completed or are in the middle of their first demographic transition. As Landry predicted several decades ago, many such countries exhibited this demographic transformation faster and in a more compressed time period than did European nations. As a result, demographers have adjusted downward their projections of the size of the total world population by around the middle of the 21st century. Not all countries, however, have experienced rapid transitions. In many nations—such as Bangladesh, the Dominican Republic, Ghana, Kenya, and Peru—fertility declines stalled in mid-transition, well before reaching replacement-level fertility. Finally, in a handful of countries—mostly in West Africa and the Sahel, a border region along the Sahara Desert—the fertility transition has barely started and life expectancy remains low.

## THE SECOND DEMOGRAPHIC TRANSITION

The idea of a distinct phase in the demographic evolution in Western countries stems directly from Philippe Ariès's (1962) analysis of the history of childhood and his much later article, "Two Successive Motivations for the Declining Birth Rate in the West" (1980). In Ariès's view, the decline in fertility during the FDT was "unleashed by an enormous sentimental and financial investment in the child." Ariès referred to this as the "child-king era," and the fertility transition was carried by an altruistic investment in child quality. Yet this motivation has diminished in modern times. Within the SDT, the motivation for parenthood is adult self-realization; as such, fertility rates have declined to well below replacement rates. Ariès postulated that the altruistic element focusing on offspring has weakened, and the adult dyadic relationship has gained prominence instead. In other words, adults are more focused on themselves and their marital relationships and less focused on producing offspring.

Another major influence on SDT theory is the humanist psychologist Abraham H. Maslow's (1954) theory of changing needs. Maslow argued that as populations become wealthier and more educated, individuals shift their attention away from needs associated with survival, subsistence, security, and solidarity. Instead, they focus on individual self-realization, recognition, grassroots democracy, and expressive work and education values.

Maslow's model carries important implications for the SDT. The SDT is an overarching theory that relies on both economic and sociological reasoning to explain the fertility shifts that occurred in all Western nations beginning in the 1960s. This theory treats ideational changes as exogenous influences that contribute to human behavior—even in periods of economic stability. The SDT links cultural shifts to dynamic processes of cohort succession. That is, sweeping social and ideational change occurs when older, traditional cohorts die off and are replaced by younger cohorts who adhere to a new set of norms and behavioral expectations. Values and behaviors are mutually influential, and these mutual influences unfold over the life course.

Consistent with these broad notions, the SDT predicts that the typical demographic outcomes (such as sustained subreplacement fertility and the growth of alternative living arrangements such as cohabitation) are likely to emerge in non-Western societies when they follow in the direction of capitalist economies, with multilevel democratic institutions and greater emphasis on Maslow's "higher order needs" such as self-actualization.

The original statement of the SDT emphasized the connection between fertility trends and the shift in values

orientations in the political and ethical domains (secularism, "post-materialist" values, anti-authoritarianism, and so on). Initially certain scholars still had some doubts about whether the new values were capable of sustaining a systemic shift in the demographic regime after 1970, but van de Kaa's 1987 article clearly postulated that Europe's SDT is much more than a short-lived accident of history.

## MAJOR CONTRASTS BETWEEN THE FIRST AND THE SECOND DEMOGRAPHIC TRANSITION

Some scholars argue that the SDT is not necessarily a new regime but is instead a mere continuation of the FDT. Such a "single-transition" view obscures major differences of both a demographic and social nature. The contrasts between the FDT and SDT are listed in Table 1. One of the main differences is found in *nuptiality trends*. In the FDT, ages at first marriage declined and the proportions marrying increased. In the SDT, by contrast, marriage occurred later, and nonmarital cohabitation rates increased—especially after 1990 in central and eastern Europe. Out-of-wedlock fertility also follows the Western trend in such nations. Moreover, such patterns are now also emerging in southern Europe (Italy, Malta, Spain, and especially Portugal).

| FDT | SDT |
|---|---|
| **A. Marriage** | |
| • Rise in proportions marrying, declining age at first marriage | • Fall in proportions married, rise in age at first marriage |
| • Low or reduced cohabitation | • Rise in cohabitation (pre- & postmarital) |
| • Low divorce | • Rise in divorce, earlier divorce |
| • High remarriage | • Decline of remarriage following both divorce and widowhood |
| **B. Fertility** | |
| • Decline in marital fertility via reductions at older ages, lowering mean ages at first parenthood | • Further decline in fertility via postponement, increasing mean age at first parenthood, structural subreplacement fertility |
| • Deficient contraception, parity failures | • Efficient contraception (exceptions in specific social groups) |
| • Declining illegitimate fertility | • Rising extra-marital fertility, parenthood within cohabitation |
| • Low definitive childlessness among married couples. | • Rising definitive childlessness in unions |
| **C. Societal background** | |
| • Preoccupations with basic material needs: income, work conditions, housing, health, schooling, social security. Solidarity prime value | • Rise of "higher order" needs: individual autonomy, self-actualisation, expressive work and socialisation values, grass-roots democracy, recognition. Tolerance prime value. |
| • Rising memberships of political, civic and community oriented networks. Strengthening of social cohesion | • Disengagement from civic and community oriented networks, social capital shifts to expressive and affective types. Weakening of social cohesion. |
| • Strong normative regulation by State and Churches. First secularisation wave, political and social "pillarisation" | • Retreat of the State, second secularisation wave, sexual revolution, refusal of authority, political "depillarisation". |
| • Segregated gender roles, familistic policies, embourgeoisement. | • Rising symmetry in gender roles, female economic autonomy. |
| • Ordered life course transitions, prudent marriage and dominance of one single family model. | • Flexible life course organisation, multiple lifestyles, open future. |

***Table 1.*** *Overview of demographic and societal characteristics respectively related to the FDT and SDT (Western Europe).* CENGAGE LEARNING, GALE.

Another important contrast between the FDT and the SDT involves the background of particular societies. With the exception of the very early fertility decline in France and a few other small European regions, much of the FDT was an integral part of a development phase during which economic growth fostered material aspirations and improvements in material living conditions. The SDT, by contrast, is founded on the rise of the higher order needs. Once the basic material preoccupations are satisfied, further income growth and educational expansion jointly lead to the articulation of more existential and expressive needs. These are centered on a triad: *self-actualization* in formulating goals, *individual autonomy* in choosing means, and claiming *recognition* for their realization. These issues emerge in a variety of domains, and this is why the SDT is related to such a broad array of indicators of ideational or cultural shift.

## RECENT SDT DEVELOPMENTS

Questions about the future development of the SDT mainly pertain to its potential spread to non-Western cultures and to the sequencing of the SDT characteristics in such contexts. In the West, either all SDT traits emerged fairly simultaneously or followed a typical sequence:

1. Postponement of marriage and parenthood, leading to subreplacement fertility.
2. Rise of premarital and postmarital cohabitation.
3. The addition as well of procreation among cohabitors.

Most cross-national differences observed to date reflect differences in the sequencing of the three above patterns. Several non-Western populations have by now experienced the first pattern: Japan, South Korea, Taiwan, Hong Kong, and Singapore all have experienced postponement of marriage and parenthood and have fertility levels well below replacement as a consequence. Demographers speculate that urban China should be added to that list. In addition, premarital cohabitation has emerged in Japan. Furthermore, fertility has dipped below replacement in a number of other settings, several of them Islamic (e.g., Iran, Tunisia, Kazakhstan), others Caribbean (e.g., Puerto Rico, Cuba, Jamaica, Trinidad and Tobago, Surinam) or part of the Indian subcontinent (e.g., the state of Kerala

and several large urban areas in India). Studies have not yet documented, however, whether fertility dips in these parts of the world are associated with postponement of marriage and parenthood.

Finally, Scandinavian and western European countries that were in the vanguard of the SDT now have fertility levels that are *higher* than those in countries that transitioned later (Sobotka, in press). In the former countries, parenthood continues to be delayed until later in life, yet many couples quickly proceed to having a second child—a process scholars refer to as the "catching-up" effect. In contrast, other countries with total fertility rates that dipped below 1.5 children generally do not exhibit this same trend. Hence, researchers have observed a major bifurcation within the SDT context between populations that do and do not exhibit a catching-up effect. It is possible that cultural differences regarding gender roles, public policies aimed at establishing gender equity, and greater compatibility between domestic duties and work have helped to facilitate couples' ability to "catch up" in terms of their childbearing. Such policies are much more pronounced in the countries that were the initial SDT trendsetters, such as those in Scandinavia and western Europe. Conversely, the persistence of traditional gender roles and/or the lack of policies facilitating the work and family combination would curtail the catching-up effect and lead to much lower fertility (e.g., McDonald, 2000; Micheli, 2000; Reher, 1998; Tsuya, Bumpass, & Choe, 2000). Such questions will be at the forefront of demographers' and life course scholars' research agendas in the coming decades.

**SEE ALSO** Volume 2: *Age Structure; Epidemiologic Transition; Global Aging; Life Expectancy; Mortality; Population Aging.*

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# DIABETES, ADULTHOOD AND LATER LIFE

Diabetes is a significant and growing chronic health problem in the United States (Mokdad et al., 2000, 2003) and around the world (Wild, Roglic, Green, Sicree, & King, 2004). For persons with diabetes, the body cannot make or properly use insulin, the hormone that converts foods (particularly sugars and starches) into the fuel that is needed for daily energy. There are three classifications diabetes diagnoses: Type 1, in which the body cannot make insulin, affects 5 to 10% of Americans diagnosed with diabetes (usually at younger ages); type 2, in which the body does not properly use insulin, affects 90 to 95% of Americans diagnosed with diabetes (usually in midlife and older ages); and gestational diabetes, which occurs during pregnancy, affects about 4% of allpregnant women in the United States (National Institute of Diabetes and Digestive and Kidney Diseases [NIDDK], 2007). More recently, doctors have begun to diagnose a condition known as prediabetes in which the body is at high risk for not properly using insulin. This condition affects more than double the number of people already diagnosed with type 2 diabetes.

The cause of diabetes is unknown, although most experts agree that many factors are involved. That is, although the reason why some people develop diabetes and others do not is unclear, scientists have made great strides in recent years in identifying both biological and environmental factors that are associated with diabetes. For example, middle-age and older adults, women who had gestational diabetes, and members of certain race and ethnic groups are disproportionately represented among those diagnosed with diabetes, particularly type 2 diabetes. Similarly, diabetes rates are higher in people who are overweight, who do not exercise regularly, or who have high blood pressure or high cholesterol (Centers for Disease Control and Prevention [CDC], 2007; NIDDK, 2007). The following sections discuss trends in the prevalence and incidence of diabetes; identify causes and correlates of diabetes; describe the consequences of diabetes; and explain the differences in the onset and management of diabetes by gender, race/ethnicity, and social status.

## TRENDS IN PREVALENCE AND INCIDENCE OF DIABETES

According to researchers at the CDC (Mokdad et al., 2000, 2003), the prevalence (or total number at any point in time) of all types of diabetes in the United States has increased sharply in recent decades—from 4.9% in 1990 to 7.9% in 2001 (or more than 60% since 1990). The increases in the prevalence of diabetes have been observed in both men and women, across all age groups, in all race/ethnicity groups, and in all but five states. Reports of diabetes in men grew from 4.1% in 1990 to 6.8% in 2001 (a 66% increase), and in women from 5.6% in 1990 to 8.9% in 2001 (a 59% increase). The age groups with the greatest changes in reports of diabetes between 1990 and 2001 were adults ages 30 to 39 (from 2.1% to 4.1%, a 95% increase), 40 to 49 (from 3.6% to 6.6%, a 83% increase), and 50 to 59 (from 7.5% to 11.2%, a 49% increase). Although type 2 diabetes has been diagnosed in younger age groups, and more so in recent years, it is still most commonly diagnosed in middle-age and older adults. In fact, about 1 in 10 adults ages 40 to 59 and 1 in 5 adults ages 60 and older have diabetes, comprising the majority of all people with diabetes (NIDDK, 2007). Unfortunately, what is known about diabetes in age groups younger than 20 is currently hampered by a lack of nationally representative data needed to track changes in the risk and onset of diabetes.

The incidence (or number of new cases) of diabetes has increased in recent years as well. Using nationally representative survey data, about 603,000 cases of diabetes were newly diagnosed in 1990, more than doubling (to 1.2 million) by 2001 (NIDDK, 2007). Some 1.5 million cases of diabetes were newly diagnosed in 2005, nearly 9 in 10 (1.3 million) of those in middle-age and older adults. Despite the fact that some of the dramatic increases in the prevalence and incidence of diabetes may be due to greater awareness of the risks for diabetes from public health campaigns and, in turn, more doctor visits resulting in diagnoses, the increases in prevalence and incidence are troubling due to the serious individual and societal consequences of the disease. Government mandates, such as those described in the federal *Healthy People* reports, aim to reverse those trends and related consequences by focusing on the known causes and correlates of diabetes.

## CAUSES AND CORRELATES

As noted earlier, if a person cannot make or properly use insulin to provide needed daily energy, it is likely that the person has higher than normal levels of blood glucose, which may lead to a diagnosis of diabetes. Symptoms common to people with diabetes include increased thirst and urination, extreme tiredness, unexplained weight loss

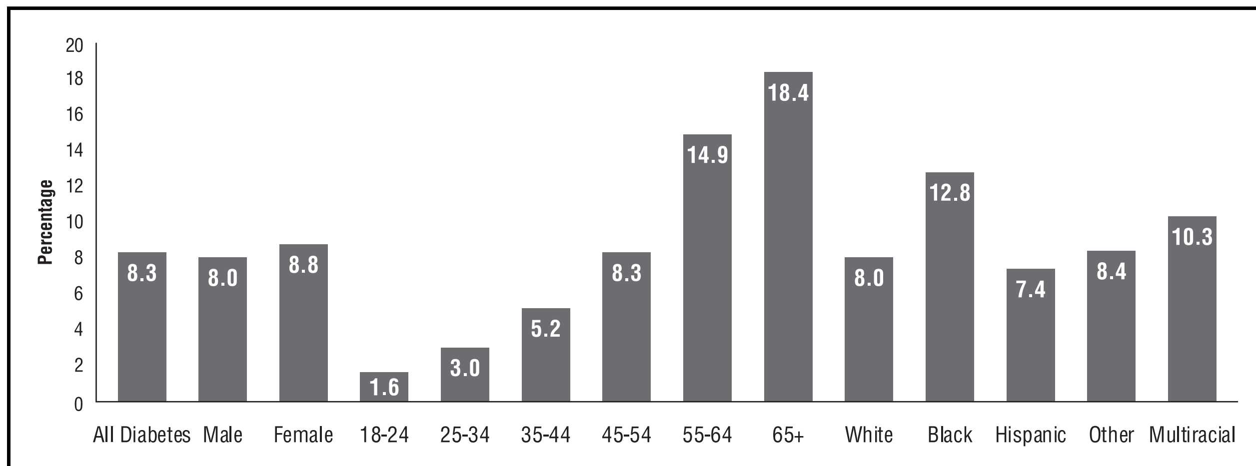


***Figure 1.*** *Diabetes prevalence in the U.S., by sex, age, and race/ethnicity, BRFSS 2006.* CENGAGE LEARNING, GALE.

or weight gain, blurred vision, frequent infections, and slow-healing wounds (NIDDK, 2007). Although the specific causes of diabetes remain a mystery, several biological and environmental factors are associated with the risk for or onset of diabetes, some nonmodifiable and some modifiable. For example, in addition to insulin problems, people with diabetes often have other clinical indicators such as higher than normal levels of blood pressure, LDL (or "bad") cholesterol, and triglycerides, as well as higher than normal waist-to-hip ratios, all indicators with both nonmodifiable and modifiable causes. The risk for diabetes also escalates with increasing age and membership in minority or non-White race/ethnic groups, both nonmodifiable factors.

Excess weight—and particularly obesity—is the modifiable risk factor most often identified with the onset and complications of diabetes. Just as the prevalence of diabetes has risen markedly in recent decades, the prevalence of obesity has also increased by more than 77% since 1990, from 11.8% in 1990 to 20.9% in 2001 (Mokdad et al., 2000, 2003). Many health care providers consider diabetes and obesity to be rising in tandem to epidemic proportions, leading to public health campaigns aimed at reversing the trends in both health problems (American Diabetes Association, 2007; CDC, 2007). Obesity, like diabetes, is disproportionately prevalent in midlife and in ethnic minority groups (Mokdad et al., 2001, 2003).

Because most of the management and consequences of diabetes are in the hands of the person living with diabetes, protective health behaviors such as weight loss and increased physical activity may be critical to good management as well as to fewer and less serious consequences. Despite the recommendations for weight loss, however, obesity is much more prevalent in people with diabetes than in those without (Mokdad et al., 2001; Wray, Blaum, Ofstedal, & Herzog, 2004). Nonetheless, a recent study documented that overweight middle-aged adults were at least 50% more likely to report they had lost 10 pounds of excess body weight if they had been diagnosed with diabetes than if they had not, suggesting that adults with diabetes understand their need to lose weight (Wray et al., 2004). In contrast, adults with diabetes continue to report lower levels of physical activity than do adults without diabetes, perhaps in part due to their higher numbers of health conditions. However, participation in other protective health behaviors may be increasing in recent years. For example, studies have shown that diabetes-related health behaviors such as daily monitoring of blood glucose, as well as getting annual appropriate physical exams, have increased between 1995 and 2001 (Okoro et al., 2004). Similarly, other general practices such as quitting smoking and getting flu and pneumonia vaccines have also increased.

## CONSEQUENCES OF DIABETES

According to NIDDK (2007), adults with diabetes are more likely than those without diabetes to have high blood pressure and other diseases and conditions associated with vascular disease, such as stroke, heart diseases, foot amputations, and vision impairments. High blood pressure is twice as common in persons with diabetes compared to persons without the disease; and up to 75% of cardiovascular disease is attributable to high blood pressure. It is not surprising then that in 2000 one in three people with diabetes reported they had also been diagnosed with cardiovascular disease. Diabetes confers a two-fold to four-fold increased risk of heart attacks and strokes in men and up to a ten-fold increased risk in premenopausal women (Engelgau et al., 2004).

***Insulin.*** *A diabetic person prepares an insulin shot.* NATIONAL GEOGRAPHIC/GETTY IMAGES.

Diabetes is also associated with limitations in physical functioning and disabilities in older adults, lower active life expectancy, and premature mortality (Wray, Alwin, McCammon, Manning, & Best, 2006). For example, age-adjusted mortality in adults with diabetes is about twice that of adults without the disease. Older adults with diabetes are also more likely to have arthritis and geriatric conditions such as incontinence, falls, and poor cognitive performance.

Diabetes killed 73,249 people in the United States in 2002, making it the sixth leading cause of death in the United States. However, that ranking may be an underestimate because diabetes is often left off death certificates as an underlying cause of death, particularly in cases in which there may be multiple causes of death (NIDDK, 2007). For instance, roughly two out of three deaths to people with diabetes are attributed to heart disease and stroke, currently the first and third leading causes of death in the United States (Miniño, Heron, Murphy, & Kochanek, 2007). An estimate of the total costs of diabetes to the United States in 2002 is $132 billion (American Diabetes Association, 2003), including both direct medical costs ($92 billion) and indirect costs from disability, work loss, and premature mortality ($40 billion), accounting for one-tenth of all health care costs in the United States.

Despite these troubling statistics, adults with diabetes can reduce their risk for serious complications by controlling their blood glucose, blood pressure, and cholesterol, as well as participating in the protective diabetes-related health behaviors such as monitoring their blood glucose and having regular foot and eye exams (American Diabetes Association, 2007). According to NIDDK (2007), good glucose control reduces the risk of eye, kidney, and nerve complications; good blood pressure control reduces risks for both heart disease and stroke, as well as eye, kidney, and nerve complications; and good cholesterol control reduces the risk of heart disease and stroke.

## DIFFERENCES BY GENDER, RACE, AND SOCIAL STATUS

The onset of diabetes differs markedly by gender, race, and social status for reasons that are not yet clear. For example, studies using nationally representative data show diabetes and its complications are found disproportionately in women as well as in African American and Hispanic American adults (Mokdad et al., 2000, 2003; Wray et al., 2006). One in every three people born in the United States in 2000—and one in every two African American, American Indian, Hispanic American, and Asian American individuals born in 2000—are projected to develop diabetes in their lifetime (CDC, 2007). Analyses of census and other population-based survey data indicate that the prevalence of diabetes will increase 225% across all ages between 2000 and 2050, a rise from 12 to 39 million, and disproportionately in members of ethnic minority groups (CDC, 2007). Reasons for that projected increase include the overall aging and ethnic diversity of the U.S. population, as well as rising rates of obesity across all ages.

Because there is currently little or no evidence that sex- or race-linked biological differences underlie differences in the prevalence of most diseases, disability, and mortality (Wray & Blaum, 2001), other factors on which males and females differ may be responsible—for example, participation in risky health behaviors (e.g., smoking, drinking, and substance abuse), personality characteristics (e.g., hostility, anger), levels of and responses to stressful situation, and social support. Many of the risky behaviors associated with diabetes and its comorbid conditions (e.g., obesity, physical inactivity, smoking) are disproportionately prevalent in older adults with diabetes, compared to their older and younger counterparts without diabetes, as well as in African American and Hispanic American adults (Wray et al., 2006).

Similarly, middle-aged and older adults with diagnosed diabetes report lower education, income, net worth, and labor force participation than do those without diabetes (Wray, Ofstedal, Langa, & Blaum, 2005; Wray et al., 2006). Many of the risk factors described above also vary widely by social status such that lower levels of schooling, income, or wealth are associated with increasing numbers of risky health behaviors (Wray, Alwin, & McCammon, 2005). Although many existing studies have indicated that these more traditional health risks explain few health and mortality inequalities in general, research on their link to disparities in diabetes in particular is sparse. Wray and colleagues (2006) documented the persistent disproportionate prevalence and incidence of diabetes in African American and Hispanic American adults in midlife and older age, even after accounting for differences in education, income, and net worth. These troubling disparities need further exploration and understanding.

The dramatically increasing rates of diabetes and its serious complications across the United States are raising major concerns with health care providers, health educators, and policy makers, as well as those who have or at risk of getting the disease. Fortunately, studies and public health campaigns stress that people can play a major role in preventing the disease or reducing its complications by adopting a lifestyle that includes eating a healthy diet, maintaining a normal weight, being physically active, not smoking, and seeing a doctor regularly.

**SEE ALSO** Volume 2: *Obesity, Adulthood;* Volume 3: *Chronic Illness, Adulthood and Later Life; Health Behaviors, Later Life; Health Differentials/Disparities, Later Life.*

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***Linda A. Wray***

# DISABILITY AND FUNCTIONAL LIMITATION, LATER LIFE

At some point in their lifetimes, many people living in the United States experience brief periods of difficulty

carrying out everyday activities. For a small minority, having a functional limitation or disability is a lifelong challenge. In old age, when the likelihood of disability is greatest, people follow a variety of trajectories over time, including full functioning until death, onset of limitation followed rapidly by recovery, and steadily increasing limitation.

Many measures and sources of information on disability and functional limitation exist, but analysis of data from the U.S. Census indicates that in 2000, 19.3% of the population aged 5 years and older or almost 50 million people had a limitation or disability. The figures for population aged 65 and older were 41.9% and 14 million (Freedman, Martin, & Schoeni, 2004, Table 1). The definition used was broad and included physical, sensory, and cognitive limitations; self-care and going-outside-the-home disability; and for those aged 21 to 64, disability that affected employment.

Disability and functional limitation may negatively affect individual quality of life and productivity; they are also associated with increased medical expenditures. As the members of the U.S. Baby Boom generation (those born 1946 to 1964) approach old age, policymakers are especially interested in tracking trends in disability over time at the population level and in understanding better who is at greatest risk of having disabilities and how onset can be delayed and recovery facilitated.

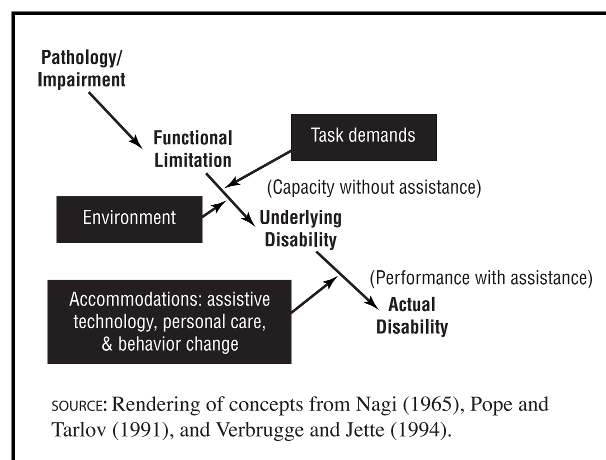


***Figure 1.*** *The disablement process.* CENGAGE LEARNING, GALE.

## INCONSISTENTLY USED CONCEPTS AND TERMS

The terms *disability* and *functional limitations* are not used consistently by researchers or policymakers in the United States or in other countries around the world. Many employ no conceptual framework at all when considering these constructs, but indeed two widely recognized models exist. The most commonly used in the United States is the so-called *Disablement Process* that draws from the work of Nagi (1965), the Institute of Medicine (Pope & Tarlov, 1991), and Verbrugge and Jette (1994). As indicated in Figure 1, the basic stages of the process are: pathology/impairment, functional limitation, and disability carrying out socially defined roles or activities in a particular environment. Although it is sometimes difficult to distinguish between pathology and impairment, theoretically the former occurs at the cellular level, and the latter at the level of an organ or systems of organs. Functional limitations, which may be physical, sensory, or cognitive, refer to the level of the organism, and disability to how the person interacts with the greater world. For example, arthritis (pathology) may make it difficult to bend the knee (impairment), thus limiting the ability of the person to stoop (functional limitation). Whether such a limitation will in turn lead to a disability regarding, say, bathing may depend on whether a person uses a shower or a bathtub. Similarly, whether arthritis of the fingers leads to a work disability may depend on the demands of the tasks involved in the job. A computer operator or piano player might have a disability, but a night watchman might not have such disability.

Note that it is not the person who is disabled or not. That is, disability is not an inherent attribute of an individual. Rather a disability arises when a person's capacity is not sufficient to meet the demands of a particular task in a specific environment. This conceptualization of disability moves beyond a simple medical perspective that conceives of disability as solely reflecting the health of an individual to a view in which the individual, the task, and the environment are all factors. Moreover, besides built environment, the term *environment* includes the social environment. For example, social role expectations may influence self-assessments of ability to carry out some routine household tasks, such as cooking and cleaning. In the past, at least, women had greater experience with such activities and perceived them as part of their roles. Expected social roles also vary by age, as indicated by the 2000 Census's limiting questioning about work disability to those aged 21 to 64.

As shown in Figure 1, besides task demands and the environment, the use of various accommodations may influence whether a person of a given health status experiences a disability. Accommodations include changes in how the task is carried out, use of assistive technology, and receipt of help or supervision from another person. For example, if one's arthritis is worsening, a person may limit trips up and down stairs each day, use a cane, or take the arm of another person. Verbrugge and Jette (1994) and a few surveys distinguish between an intrinsic

or underlying disability—an inability on one's own—and actual or residual disability—an inability even with behavior change, aids, and help.

Internationally, the World Health Organization has been at the forefront of efforts to conceptualize and measure disability since 1980. In the late 1990s, it undertook a consultative process that led to the 2002 publication of its International Classification of Functioning, Disabilities, and Health (known as ICF; World Health Organization, 2002). The ICF emphasizes positive language, focuses on participation in life situations as its ultimate outcome, and, like the Disablement Process, emphasizes the role of the environment, including physical, social, and attitudinal factors. A report by a committee of the U.S. Institute of Medicine (Field & Jette, 2007) encouraged the ICF's further refinement and operationalization with particular attention to developing a clearer distinction between specific activities of life and broader domains of participation. Nevertheless, the report called on various U.S. government statistical agencies to go ahead and adopt the ICF. In the meantime, the language of the Disablement Process framework is more commonly, although not universally or precisely, used in research and data collection in the United States.

## MEASURES

Multiple national-level surveys and the Census in the United States collect information from older people on functional limitations and disability. Typically these data take the form of self-reports, and response categories include difficulty, severity of difficulty, or inability. Some questions are phrased in terms of intrinsic disability, but others in terms of residual disability. Some surveys follow up questions about intrinsic disability with questions about use of assistive technology or personal help. One notable survey, the National Long Term Care Survey (NLTCS), imposes a requirement of chronicity, that is, it asks about disability lasting at least three months. For those who are unable to answer for themselves, proxy responses are sought by most surveys, although such responses in some cases may differ from self-reports if they were possible. Finally, whether the survey includes the institutionalized population as well as those living in the community may influence estimates. Thus, no universal method is used for seeking information about functional limitations and disability (Freedman, Martin, & Schoeni, 2004), although the core concepts are similar, as indicated in the following discussion.

**Functional Limitations** The most commonly used survey indicators of physical functional limitations in old age are the so-called Nagi (1965) measures, which were designed to assess Social Security disability applicants. Although originally used by medical personnel, today population surveys elicit self-reports of difficulty with such functions as standing for two hours, sitting for two hours, walking several blocks, lifting and carrying 10 pounds, stooping, climbing a flight of stairs, reaching over one's head, and grasping a small object. For example, since 1997 the annual National Health Interview Survey (NHIS) has asked one adult per household about nine such functions. Sometimes these measures are analyzed individually, but at other times researchers combine all the measures into a single indicator of ability or difficulty, or into indices of lower-body and upper-body functioning.

Tests in laboratory and clinical settings have indicated that some simple measures of physical performance also are predictive of the onset of disability and mortality (e.g., Guralnik, Simonsick, Ferrucci, Glynn, Berkman, Blazer et al., 1994; Onder, Penninx, Ferrucci, Fried, Guralnik, & Pahor, 2005; Rantanen, Volpato, Ferrucci, Heikkinen, Fried, & Guralnik, 2003). Accordingly, interest is growing in conducting such tests of physical functioning, rather than relying solely on self-reports, during in-person survey data collection efforts. For example, the 2002 wave of the Health and Retirement Study (HRS) included tests of lung function, grip strength, and walking speed. In the 2006 wave, tests of standing balance were added.

Regarding sensory functioning, questions about vision are often phrased in terms of difficulty reading a newspaper even when using glasses or contacts, but sometimes concentrate on blindness. Questions about hearing also range from difficulty hearing a conversation or the television to deafness. For example, the 2000 U.S. Census asked about blindness, deafness, and severe vision or hearing impairment.

A battery of questions are typically used to assess cognitive limitations, which may include difficulty with short- and long-term memory, deterioration of language function, apraxia (impaired ability to execute motor activities), agnosia (inability to recognize objects), and disturbances in executive functioning (inability to think abstractly and process information). The Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975), which was designed for clinical settings, forms the basis for the Telephone Interview Cognitive Screen (Brandt, Spencer, & Folstein, 1988), which in turn has been modified and adapted by various surveys. For example, the Asset and Health Dynamics of the Oldest Old study (AHEAD) and the HRS focus on memory and executive functioning. In particular, they use an immediate recall test involving 10 words (10 points); a delayed recall test of the same words (10 points); naming the day of the week and date (4 points); naming the object that people usually use to cut paper, the kind of prickly plant

that grows in the desert, and the U.S. president and vice president (4 points); a serial 7s test that requires subtracting 7 from 100 five times (5 points); and counting backwards from 20 for 10 consecutive numbers (2 points). Different researchers use different summary measures, but Herzog and Wallace (1997) have suggested that those scoring eight or less (out of 35) are likely severely cognitively impaired.

**Disability** Disability is the most commonly used measure of the "health" of the older population. For members of this group, being able to care for themselves and live independently in the community are typically viewed as extremely desirable. Thus, assessment of disability in U.S. surveys of the older population is most often based on questions about activities of daily living (ADLs) and instrumental activities of daily living (IADL). The ADL battery of questions was originally proposed by Katz and colleagues (Katz, Ford, Moskowitz, Jackson, & Jaffee, 1963; Katz, Downs, Cash, & Grotz, 1970) to gauge the potential for rehabilitation of older hospital patients and involves asking about and observing such personal self-care activities as bathing, dressing, using the toilet, eating, transferring from bed to chair, continence, and grooming. The IADL questions were developed by Lawton and Brody (1969) to assist health care providers and others in assessing competence in taking care of such more routine needs as using the telephone, shopping, preparing meals, housekeeping, doing laundry, taking public transportation, taking medication, and handling finances. In the case of both ADLs and IADLs, some surveys ask about any difficulty or degree of difficulty doing these activities, with some including a response of inability as the most severe category. Some questions are formulated in terms of underlying disability, but others about residual disability, that is, even with help from another person or use of assistive technology. Yet another model is provided by the NHIS, which asks about need for help with these activities.

U.S. government programs to assist those with disability use a variety of definitions of disability (Freedman, Martin, & Schoeni, 2004). The largest program, that of the Social Security Administration, focuses on those under age 65 and on work disability by which it means the "inability to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months." This definition focuses on the health of the individual and does not take into consideration the environmental considerations of the conceptual frameworks presented earlier. Moreover, it does not focus on a specific job and the task demands of it, but on gainful activity in general. Nor, given the purpose of determining benefit eligibility, does it address the possibility that people who are working might still have limitations associated with work (Jette & Badley, 2000).

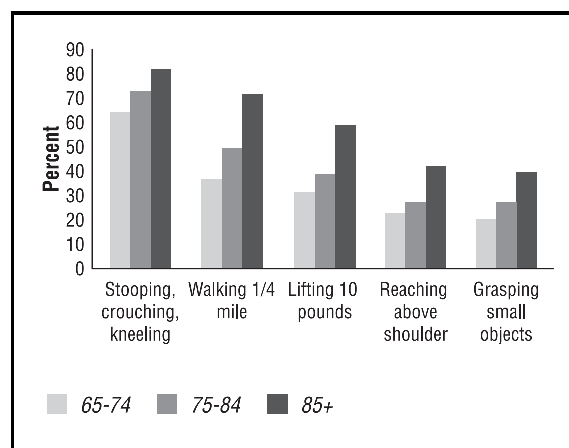


***Figure 2.*** *Percentage of community-dwelling population 65 and over with difficulty with physical functions by age group, 2004.* CENGAGE LEARNING, GALE.

Unlike the census, some surveys, such as the Current Population Survey (CPS), do ask older people about work disability. The CPS uses a definition similar to, although not exactly the same as, that of the Social Security Administration. However, as acknowledged by the survey designers, concern exists that answers to questions about work disability may represent rationalization of retirement decisions after the fact (Kreider, 1999) and, in the preretirement years, may be influenced by the availability of disability benefits (Duggan & Ingerman, 2008). Thus, for purposes of understanding the relation between health and work, such questions should be used with care.

## LEVELS OF FUNCTIONAL LIMITATIONS AND DISABILITIES

Figure 2 presents data from the 2004 Medicare Current Beneficiary Survey (MCBS) for five physical functional limitations for the 65 and older population by broad age groups. Clearly limitations increase with age, and such lower-body functions as walking one quarter mile present more difficulty than such upper-body functions as grasping small objects. Overall, almost 70% of the 65 and older population (all age groups combined) reported difficulty with stooping, crouching, and kneeling. However, as noted earlier, the way questions are worded may make a big difference in how people assess their functioning. The National Center for Health Statistics (NCHS) points out that a similar question on the NHIS that substitutes *bending* for *crouching* results in fewer than 50% reporting difficulty (NCHS, 2007a).

| | 65+ | 65–74 | 75–84 | 85+ |
|---|---|---|---|---|
| **IADLs** | | | | |
| Doing heavy housework | 30.59 | 23.12 | 33.46 | 52.95 |
| Shopping | 13.39 | 7.96 | 14.41 | 32.96 |
| Doing light housework | 11.39 | 7.43 | 12.10 | 25.78 |
| Preparing meals | 8.84 | 5.09 | 9.01 | 24.01 |
| Managing money | 6.93 | 3.52 | 7.43 | 21.16 |
| Using the telephone | 6.83 | 3.15 | 7.42 | 18.83 |
| **ADLs** | | | | |
| Walking | 23.37 | 16.53 | 26.18 | 43.20 |
| Getting in/out of bed/chairs | 11.69 | 8.12 | 13.11 | 24.66 |
| Bathing/Showering | 9.59 | 5.31 | 10.52 | 22.17 |
| Dressing | 6.25 | 3.97 | 6.76 | 14.19 |
| Using toilet | 4.67 | 2.62 | 5.06 | 12.05 |
| Eating | 2.17 | 1.33 | 2.30 | 5.33 |

SOURCE: National Center for Health Statistics. Trends in Health and Aging Website, www.cdc.gov/nchs/agingact.htm.

***Table 1.*** *Percentage with difficulty with instrumental activities of daily living and activities of daily living by age, community-dwelling population ages 65 and over, Medicare Current Beneficiary Survey, 2004.* CENGAGE LEARNING, GALE.

Sensory and cognitive limitations also increase with age. In 2004, according to NHIS data for the community-dwelling population, 14% of those aged 65 to 74 reported trouble seeing, even with glasses or contacts, compared with 20% of those ages 75 and older (NCHS, 2007b). The proportions reporting deafness or trouble hearing without a hearing aid were 7% and 15%, respectively. Data from the HRS from the mid-1990s indicate that about 6% of the 70 and older community-dwelling population is cognitively impaired, with percentages ranging from 3% for those aged 70 to 74, to 24% for those 90 and older (Suthers, Kim, & Crimmins, 2003). The proportions for the population in institutions are much higher, roughly 50%, but do not vary much by age. Overall, about 10% of the U.S. population 70 and older is cognitively impaired.

All of these functional limitations—physical, sensory, and cognitive—may contribute to difficulties with IADLs and ADLs. Table 1, which is based on data from the 2004 MCBS, shows the proportions of the older population with specific IADL and ADL disabilities. Reports of IADL difficulty among the 65 and older group range from 7% for using the telephone to almost a third for doing heavy housework.

Less common is difficulty with ADLs, which typically identifies the older population with the greatest needs. Only about 2% of the 65 and older population report difficulty eating, but 10% report difficulty bathing or showering, and mobility within the house is a problem for almost a quarter.

The figures presented in Table 1 are for the noninstitutionalized population. Not surprisingly, a much greater proportion of the older population living in long-term care facilities report difficulties. (In the MCBS, facilities are defined as institutions having three or more beds and providing long-term care, such as nursing homes, assisted care homes, and mental health institutions.) For example, more than 90% of the 65 and older population in facilities report difficulty with bathing or showering, which some consider a sentinel ADL.

The variation by age in functional limitation and disability has been highlighted, but significant disparities by other demographic and socioeconomic characteristics also exist. Generally, women are more likely than men to experience limitations and disabilities, as are the unmarried, members of racial and ethnic minorities, the least educated, and the poorest (Freedman, Martin, & Schoeni, 2004). An exception to these patterns is hearing limitation, which is more common among men than women, perhaps reflecting occupational exposure to loud noise.

## POPULATION TRENDS OVER TIME

A central question in the study of aging is whether the extra years of life that result from improvements in survival are spent in good or bad health. Some have argued that there will be an epidemic of disease as older people are kept alive in increasingly frail states (Gruenberg, 1977), whereas others have suggested that there will be a compression of morbidity to a short period before death (Fries, 1980). A third, intermediate, perspective hypothesizes an increase in chronic disease but whose progression is slowed (Manton, 1982).

Although disability is not a pure measure of health, it has been the measure related to late-life health that has been most commonly assessed over time at the population level in the United States. So when studies based on data from the 1970s suggested increasing disability (Waidmann, Bound, & Schoenbaum, 1995), prospects for health in old age were thought to be gloomy.

Subsequently, the research and policy communities were surprised and somewhat cautious in response to the initial report of decline in late-life disability in the 1980s, which was based on NLTCS data (Freedman & Soldo, 1994; Manton, Corder, & Stallard, 1993). But an additional decade of data from the NLTCS and data from other surveys have shown a similar trend (Freedman, Martin, & Schoeni, 2002). In addition, a collaborative effort by the top researchers in the field to understand differences in survey designs and other technical issues has led to the consensus that late-life disability has indeed declined since the late 1980s (Freedman, Crimmins, Schoeni, Spillman, Aykan, Kramarow et al., 2004).

Data from the 1984 to 2006 NHIS, which of all the national surveys provides the longest time series of consistently measured annual observations, indicate that for

much of the period decline in needing help with IADLs appears to drive the decline in overall disability. Detecting changes in ADL-type disability has been more challenging, in part because of the smaller numbers involved. One group of experts, however, using all the available data sets and taking into consideration the differences in question wording, concluded that although evidence was mixed for the 1980s, there indeed was a decline in ADL-type disability for the 70 and older population beginning in the mid- to late-1990s (Freedman, Crimmins, Schoeni, Spillman, Aykan, Kramarow et al., 2004).

Among the IADLs, Spillman (2004) has found using NLTCS data that the biggest declines in disability were for managing money, shopping for groceries, and doing laundry. She suggests that the improvement in the first may be less about physical and cognitive functioning and more about the shift of the Social Security Administration to direct deposit of checks in 1987.

Time trends in functional limitations, whether physical, cognitive, or sensory, have been studied less than trends in disability (see Freedman, Martin, & Schoeni, 2002, for a review of work until that date). Data from the Survey on Income and Program Participation show declines in physical and vision limitations from 1984 to 1999 (Cutler, 2001; Freedman & Martin, 1998). Other datasets show little change in hearing limitations over the period. Analysis of more recent data suggest increases in physical functional limitations for the older population (Kramarow, Lubitz, Lentzner, & Gorina, 2007), but clearly more research is needed on these health measures.

There is some controversy about trends in late-life cognitive functioning. Freedman, Aykan, & Martin (2001) analyzed 1993 and 1998 data from the HRS (and its companion AHEAD study) and found a decline in severe cognitive impairment in the 70 and older population, but Rodgers, Ofstedal, & Herzog (2003) found no improvement after they added data from the 2000 wave to the analysis and controlled for the possibility of panel respondents retaining knowledge of the test from one wave to the next. However, analysis of NLTCS data suggests a decline in severe cognitive impairment from 1982 to 1999 (Manton, Gu, & Ukraintseva, 2005).

This discussion of trends in functional limitation and disability has focused on recent decades. However, some research on change in disability from early in the 20th century until recent years compares data on Union Army veterans of the Civil War era with contemporary data. Such comparisons are challenging given differences in sampling, measurements, and so on, but indicate declines in prevalence of physical and sensory limitations over the course of the century (Costa, 2002).

This discussion also has focused on *average* trends in functioning and disability. Only limited research has been done on demographic and socioeconomic disparities in trends. Schoeni, Freedman, & Martin (2008) have found using NHIS data that all major demographic and socioeconomic groups experienced declining disability (ADL and IADL combined) in old-age from 1982 to 2002, but the magnitude of the decrease was larger for those who had higher income, had more years of education, were married, and were younger. For ADL-type disability, there were actual increases in the prevalence of disability for those with the lowest income and those with 8 or fewer years of education (Schoeni, Martin, Andreski, & Freedman, 2005).

## EXPLANATIONS FOR THE DECLINE IN LATE-LIFE DISABILITY

Understanding why late-life disability has declined in recent decades may be helpful in extending the decline into the future and expanding it to subgroups of the population that have not yet benefited. Identifying the reasons, as well as any health costs associated with them, also may inform projections of future Medicare spending (Chernew, Goldman, Pan, & Shang, 2005). Given the plethora of possible explanations (e.g., demographic, socioeconomic, medical, and environmental), however, no single data set allows simultaneous examination of all these influences.

One socioeconomic change that has undoubtedly played a role is the dramatic increase in the educational attainment of older people in the United States over the last few decades of the 20th century (Freedman & Martin, 1999). Data from the Current Population Survey indicate that the proportion of the 65 and older population with eight or fewer years of education declined from 35% in 1985 to 13% in 2005. Over the same period the proportion with more than a high school education doubled from 19% to 38%. Freedman and Martin concluded that, depending on the specific function, from 25% to 75% of the decline in functional limitations among the 65 and older population from 1984 to 1993 could be attributed to increased education attainment. They could not specify the particular mechanisms by which more education reduces limitations but mentioned multiple possibilities, including greater access to health care throughout life, healthier behaviors, less risky occupations, and greater use of assistive devices.

Through a thorough literature review and several new analyses, Schoeni, Freedman, and Martin (2008) eliminated several possible explanations for the disability decline and highlighted several others as promising. Data from the NHIS indicate that from 1997 to 2005, respondents ages 70 and older have become less likely to report some conditions as causing their disability, namely, heart and circulatory conditions, musculoskeletal conditions, and vision problems. This pattern is

confirmed by Schoeni and colleagues' analysis of data from 1982 to 2005, as well as by Freedman and colleagues' analysis (Freedman, Schoeni, Martin, & Cornman, 2007) for the period from 1997 to 2004 for the 65 and older population. At the same time, these studies suggest that cancer, diabetes, ear conditions, lung disease, mental conditions, and conditions of the nervous system have not played a significant role in the decline in rates of disability. Although detailed time series data on medical interventions over the same period are not available, the authors note the concurrent increases in the pharmacological treatment of and surgical procedures for heart disease (e.g., beta blockers, balloon angioplasty), musculoskeletal conditions (e.g., nonsteroidal anti-inflammatories, joint replacement surgery), and vision problems (e.g., cataract surgery), which may in part explain the decline in disability.

Schoeni, Freedman, and Martin (2008) also find that increases in the use of assistive technologies, declines in poverty, declines in widowhood, as well as increases in the educational attainment of the older population have likely played a role in the disability decline. They rule out roles for changes in smoking behavior (which thus far have been small, as reported by the surviving population in old age) and changes in some aspects of population composition, namely, race/ethnicity and foreign birth. Overall, Freedman and colleagues (Freedman, Schoeni, Martin, & Cornman, 2007) find that changes in sociodemographic risk factors account for about one third and changes in chronic conditions about two thirds of the decline from 1997 to 2004.

## INDIVIDUAL DISABILITY DYNAMICS AND LIFE-COURSE PERSPECTIVES

The preceding discussion of late-life disability trends was focused on time series of the prevalence of disability, namely, the proportion of the population at any one time reporting having a disability. However, underlying these cross-sectional snapshots are many individual experiences of disability onset, progression, and recovery. Studying dynamic aspects of individual disability requires longitudinal survey data that track respondents' experiences over time. The frequency of observations is critical. Even with one-and two-year intervals between survey waves (which is typical of the best of nationally representative surveys for this purpose, such as the Longitudinal Study on Aging [LSOA] and the HRS), many transitions in disability may be missed. Based on monthly data from a small study in the New Haven, Connecticut, area (sample size: 754 people), Gill and colleagues (Gill, Hardy, & Williams, 2002) found that such intervals often underestimate recovery, as well as disability onset among those who die or who are lost to follow-up during the survey interval. That substantial recovery from disability occurs has been known for some time (e.g., Crimmins & Saito, 1993), but analysis of such monthly data indicates that it is even more common than previously thought. Hardy & Gill (2004) found using the New Haven data that more than 80% of people experiencing onset of disability in at least one of four ADLs recovered within 12 months, most of the recovery took place in the first six months, and more than half of those who recovered maintained independence for at least six months.

In addition to data demands, investigating disability dynamics involves methodological challenges, especially as one moves beyond models of just two periods. As the number of observations, starting states (disabled or not), and outcomes (disabled, not disabled, dead, lost to follow-up) grows, the possible number of trajectories multiplies. Simply summarizing these trajectories, let alone identifying common characteristics of people with similar trajectories, is daunting (Wolinsky, Armbrecht, & Wyrwich, 2000).

In their two-period models of LSOA data on physical functional limitations, ADLs, and IADLs, Crimmins and Saito (1993) found that among the community-dwelling population ages 70 and over, between 1984 and 1986, higher age and being non-White were associated with onset of limitation or disability, but generally not with recovery. Being female was associated with greater risk of onset of functional limitation, but smaller risk of developing a disability among those starting the observation period without one. It could be that those women who experienced disability were more likely to move into institutions and thus not be included in the survey. Generally, having arthritis, vision or hearing problems, or a stroke had the strongest relations with onset.

Evidence is growing that the factors associated with onset indeed are different from those associated with recovery. For example, focusing on functional limitations and using data for the 25 and over population from the Americans' Changing Lives Survey for 1986 and 1994, Zimmer and House (2003) found that income is associated with both onset and recovery, but education is related only to onset, suggesting a relatively greater role for it in the prevention of the development of functional limitation. Similarly, Melzer, Izmirlian, Leveille, and Guralnik (2001) have found, using data for a subnational sample of people aged 65 to 84 who were observed for seven years in the 1980s, that education is associated with the onset of, but not recovery from, inability to climb a flight of stairs or walk half a mile.

These results and the broader literature on the enduring influences of early-life experiences on late-life health (see, for example, Kuh & Ben-Shlomo, 2004) argue for a life-course perspective in research on late-life functioning and disability. Unfortunately, the necessary

data for such analyses are rare. The HRS has asked respondents to assess retrospectively their childhood health and socioeconomic status (SES). Using these data, Freedman and colleagues (Freedman, Martin, Schoeni, & Cornman, 2008) found that among the 75 and older population from 1995 to 2004, even after controlling for late-life factors (such as SES and health), being born in the southern United States, reporting less than excellent health as a child, and having eight or fewer years of education are associated with having a disability in late life. The influences of other early-life factors, such as disadvantaged childhood SES and mother's education level being low, are reduced after late-life factors are controlled for, suggesting that they affect late-life disability only indirectly.

Of course, as mentioned at the outset, for some small group, disability is a life-long experience. Using data from a special disability supplement to the 1994 NHIS, Verbrugge and Yang (2002) found that 9% of adults who had a disability reported onset before age 20. Moreover, a recent Institute of Medicine report (Field & Jette, 2007) noted that the survival of children and young adults from previously fatal conditions is increasing the number of people at risk for midlife disability, the development of secondary conditions (i.e., conditions that result from the disability), negative consequences of earlier treatment (e.g., for childhood cancer), and premature aging.

## FUTURE TRENDS AND RESEARCH

Will the declines in late-life disability continue? Most projections have involved either linear extrapolations of past disability trends or have focused on trends in a particular factor associated with disability in the cross-section. For example, much media attention has been given to the growth of obesity in the United States, and some researchers have modeled how a continuation of that trend might affect disability prevalence, assuming that the relation between obesity and disability is stable (Sturm, Ringel, & Andreyeva, 2004). Although this connection warrants close monitoring and obesity is indeed associated with disability, relatively few older people report that obesity causes their disabilities, in comparison with those attributing disabilities to other health conditions such as arthritis and cardiovascular disease (Freedman et al., 2007).

Educational attainment of older people, a very important covariate of late-life disability in the cross-section, can be predicted with much greater certainty, because most people complete their education relatively early in life. Although more education played an important role in the 1984 to 1993 decline in functional limitations mentioned earlier and although the increase in the educational attainment will continue into the future, Freedman and Martin (1999) have cautioned that the rate of increase will be slower. In analyses of disability decline from 1997 to 2004 (Freedman et al., 2007), education did not on balance play a role. The overall increase in educational attainment was offset by the growing disability disadvantage of those with relatively low education, perhaps a more negatively selected group over time.

Given the many influences on the disablement process and without a better overall understanding of the reasons for the recent declines in late-life disability, it is difficult to predict the future. New data collection efforts ideally will track all the elements of the Disablement Process and will obtain frequent observations of disability status for improved analysis of individual onset and recovery. Such information also may facilitate the development and evaluation of interventions to prevent the onset of disability and to enhance the chances of recovery.

Also essential is refinement of the measures used to assess disability in population-based surveys. More than 40 years have passed since the design of the ADL and IADL questions still commonly used in the early 21st century. Daily activities of older people have certainly changed, especially with the revolution in information and communication technologies. Moreover, as labor force participation in late life has grown, greater attention to barriers to and facilitators of work is warranted. More generally, given their relatively low prevalence in the community-dwelling population, alternative measures to ADLs and IADLs that incorporate all levels of functioning are needed to understand and possibly prevent downward transitions. Wider use of self-reports of physical functional limitations and performance-based measures, which provide complementary information, could be helpful.

The subjective nature of self-reports of disability and functional limitations has been the focus of recent innovative research attempting to benchmark responses across different subgroups and periods. The use of so-called *anchoring vignettes* appears promising (Salomon, Tandon, & Murray, 2004). Besides being asked about their own health, respondents are presented with vignettes describing hypothetical persons and asked to rate their health or disability. Responses to the vignettes allows recalibration of own responses and thus more accurate interpersonal comparisons.

Another new approach to understanding late-life disability is the collection of time-use data. Although not measuring disability per se, such data may help identify how behavior changes to accommodate mismatches between underlying capacity, task demands, and the environment. This technique also may provide information on how the onset of or recovery from disability affects time devoted to other tasks, as well as insight into how to enhance fuller participation of older people and those who help them in activities that they enjoy and value.

**SEE ALSO** Volume 3: *Active Life Expectancy; Arthritis; Assistive Technologies; Chronic Illness, Adulthood and Later Life.*

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***Linda G. Martin***

## DRINKING, LATER LIFE

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# E

## ELDER ABUSE AND NEGLECT

Elder abuse and neglect is controversial. Everyone seems to agree that it is a national, even global, problem with serious consequences for victims. There is little consensus, however, on anything else. Controversy exists on how to define elder abuse and neglect, what forms it takes, how frequently it occurs, and what characterizes victims and perpetrators.

The crux of the controversies rests in scholars' and practitioners' inability to come up with a universally accepted definition of elder abuse and neglect. Since the late 1970s this has challenged researchers and policy makers alike. The areas of contention include whether or not actions against older adults must be intentional (as opposed to passive behaviors), reflect repeated patterns of conduct (versus single incidents), involve only older adults who are vulnerable because of mental or physical impairments (as opposed to including those who are cognitively intact and able-bodied), and be perpetrated by persons who have a close or special relationship with the victim (versus strangers or casual acquaintances).

Lack of consensus has resulted in a proliferation of different elder abuse and neglect definitions in empirical studies and state laws, thus limiting the comparability of research findings and reporting statistics. The National Research Council (2003) convened a panel of experts to evaluate research on elder abuse and neglect and develop recommendations for future directions. In doing so, it proposed a standardized definition that considers the problem in relatively narrow terms. "Elder mistreatment" represents:

> (a) intentional actions that cause harm or create a serious risk of harm, whether or not harm is intended, to a vulnerable elder by caregiver or other person who stands in a trust relationship to the elder, or (b) failure by a caregiver to satisfy the elder's basic needs or to protect the elder from harm. (p. 39).

Definitions lend themselves to classifying elder abuse and neglect into forms. Again, there is no universally accepted set, although those suggested by the National Center on Elder Abuse are commonly used: physical abuse, sexual abuse, emotional abuse, financial/material exploitation, neglect, abandonment, and self-neglect. Missing from the list but frequently found in international descriptions of the problem are violation of rights, abduction, and systemic abuse (in which the failure to adequately or appropriately implement policy or services contributes to abuse occurrences).

### PROBLEM SCOPE AND REPORTING

Although it is uncertain how frequently elder abuse and neglect occurs, there is evidence that the problem is far from rare, with certain forms experienced by older adults more than other forms. Unlike the areas of child mistreatment and partner violence, no national prevalence study of elder abuse and neglect has been conducted in the United States. As a result, knowledge in this area is based on a number of geographically and often methodologically limited investigations. Together these investigations suggest a prevalence rate between 1% and 10% among surveyed older adults (Anetzberger, 2005).

A random sample study of elderly households in the metropolitan Boston area revealed physical abuse to be twice as common as verbal aggression and four times as frequent as neglect. Other forms were not considered (Pillemer & Finkelhor, 1988). These findings contrast with those from the National Elder Abuse Incidence Study (National Center on Elder Abuse, 1998) and compilations of state reports on elder abuse and neglect.

The National Incidence Study's aim was to uncover new domestic cases seen by adult protective services (APS) or community agencies serving older adults during 1996. Using a representative sample drawn from 20 counties in 15 states, researchers suggested an annual elder abuse and neglect incidence rate of 551,011. They also found that only 21% of the cases had been reported to APS, despite the existence of mandatory reporting laws in nearly every state. The largest number of cases (over one-third) represented self-neglect, that is, situations in which an older adult is unable to perform self-care tasks, such as obtaining food and shelter or managing finances, because of impairment or incapacity. Among the remainder of the cases, the most common forms (in order of frequency) were neglect, psychological abuse, exploitation, and physical abuse.

The National Center on Elder Abuse commissioned a nationwide collection of state-level APS data on elder abuse and neglect for 2004 (Teaster et al., 2006). The results revealed that APS received a total of 565,747 reports that year affecting both older and vulnerable younger adults, a nearly 20% increase from 2000. Among reports in which elder abuse was confirmed, the most common form was self-neglect (39.3%), followed by caregiver neglect (21.6%), financial exploitation (13.8%), emotional/psychological/verbal abuse (12.8%), and physical abuse (10.1%). Sexual abuse represented just 1.1% of substantiated reports.

Outside of the United States, elder abuse and neglect prevalence rates seem to fall into the 1% to 10% range as well. This is true for such countries as Canada, Great Britain, Germany, Finland, Australia, and Korea. Rates appear to be higher in only a very few locales, such as Hong Kong at 23.5% (Yan & Tang, 2001); this may result, however, from using a broader definition of elder abuse for research purposes. Moreover, for several of these countries, and in contrast to the situation in the United States, financial exploitation and verbal abuse appear to be more common than other forms.

## HISTORY OF ELDER ABUSE AND NEGLECT RECOGNITION

Elder abuse and neglect has likely existed throughout human history. Examples of it date back centuries in both historical records and literature. Much seems to reflect a perception by younger family members that older relatives are burdens. This is evident in ethnographic accounts of the Fulani of West Africa and the Inuit of North America along with documents on the treatment of elderly widows in 16th- and 17th-century Europe and colonial America, for instance. In literature, elder abuse and neglect is found in such early writings as Greek mythology, old English fairy tales, and even Shakespearean plays such as *King Lear*. Prior to the 20th century, however, nowhere is the phenomenon viewed as a social problem, public health issue, or notable criminal activity.

Recognition of elder abuse and neglect as a societal concern had antecedents in the United States during the 1950s and early 1960s. At that time attention in urban communities, such as Cleveland and Chicago, began focusing on the growing number of adults living to old age and believed to be at risk of neglect and exploitation because they were mentally impaired, lived alone, and lacked nearby or adequate family support. APS evolved from this and then expanded across the country with an infusion of funding from Title XX of the Social Security Act into social welfare agencies during the mid-1970s.

Concurrently, physicians in the United States and Great Britain began recognizing physical abuse and self-neglect among some of their elderly patients, describing the syndromes in medical journals and other publications. By the late 1970s, exploratory studies of elder abuse and neglect were underway, Congressional hearings on the problem were beginning, and states started enacting laws to provide appropriate responses.

Most experts agree that the 1980s represented the watershed decade for elder abuse and neglect recognition. By its end, media portrayals of the problem were fairly common, most states had passed elder abuse reporting laws, research had begun unraveling the dimensions and dynamics of elder abuse and neglect, the first quarterly academic journal devoted to the subject was launched—Haworth Press's *Journal of Elder Abuse & Neglect*—and many relevant national and local advocacy organizations and clearinghouses had been formed, including the National Committee for the Prevention of Elder Abuse and the Clearinghouse on Abuse and Neglect of the Elderly.

Since 1990 research on elder abuse and neglect has advanced, largely as a result of scholarly forums establishing agendas for empirical study and expanded funding opportunities, especially from the National Institute on Aging and the National Institute of Justice. These advancements have generated interest in the topic among investigators new to the field and supported research into aspects of elder abuse and neglect insufficiently studied in the past. Similarly, evaluation of programs and approaches

to detect, prevent, and treat the problem have become more common. The effort to learn what works and what does not mirrors broader movements in medicine and criminal justice for evidence-based interventions, as the field of elder abuse and neglect itself has become more medicalized and criminalized.

## THEORETICAL EXPLANATIONS AND RISK FACTORS

Various theories have been proposed to explain elder abuse and neglect. Some have been used to understand other mistreated populations. Conflict theory and feminist theory are good illustrations. Applied to an elderly population, conflict theory suggests that given imbalances in scarce resources, such as available time or money, the potential exists for someone to take advantage of an older adult. Feminist theory sees violence against women, including elderly ones, originating in structural inequities in society that foster gender disadvantage.

Only a few theories have been supported through empirical investigation, most notably psychopathology theory and symbolic interactionism. Psychopathology theory suggests that problems in psychosocial functioning of the perpetrator can promote or provoke elder abuse and neglect. With symbolic interactionism, elder abuse and neglect occurs in social relations with discrepancies between behaviors and role expectations. Caregiving can be such a relationship. Research indicates that mistreatment may result when the caregiver finds the behaviors of the elderly care recipient disturbing or disruptive, particularly when the behaviors also are regarded as deliberate or controllable. If the care recipient is noncompliant, complaining, criticizing, or aggressive, this can represent disturbing behavior for abusive caregivers.

Finally, some theories have been combined into overarching perspectives on the problem. Edward Ansello's (1996) environmental press model also provides operational protocols for interventions to address elder abuse and neglect. The model incorporates various theories to diagnose the origins of inadequate care or neglect of an impaired older adult and to recommend courses of treatment. Accordingly, inadequate care or neglect can result when the demands of the environment are either too strong or too weak for the individual to exercise his or her competence.

A complex problem such as elder abuse and neglect is unlikely to be explained by any single theory, and no theory, alone or in combination with other theories, has been rigorously tested. Instead, empirical study has focused on identifying risk factors for the problem. Risk factors may encompass characteristics of the perpetrator, victim, or environment that tend to predict the occurrence of elder abuse and neglect. Although many risk factors are suggested in the literature, only a handful have been substantiated through research (Lachs & Pillemer, 1995; National Research Council, 2003).

The most important risk factors relate to the perpetrator, and chief among them are pathology and dependency. Perpetrators, more than nonperpetrators, have been found to be alcoholic, to have a diagnosed mental illness, to have spent time in a psychiatric hospital, or to suffer emotional distress (Anetzberger, Korbin, & Austin, 1994; Reis & Nahmiash, 1998; Wolf & Pillemer, 1989). Moreover, they are more likely to be dependent on the victim with respect to finances or housing. Other suggested perpetrator risk factors have less support through research, including caregiver stress and transgenerational violence.

Important victim risk factors are functional incapacity and problem behaviors. Incapacity can be due to physical, cognitive, or mental impairment. It can render the victim dependent on the perpetrator for care, which may be inadequate or inappropriate. Functional declines also can reduce the victim's awareness of elder abuse and neglect or inhibit his or her ability to stop or escape from it. Although problem behavior was discussed previously, one source deserves special mention. Studies suggest that those who care for persons with dementia are two to three times more likely to mistreat care recipients than those caring for persons without dementia (Paveza et al., 1992). Other proposed victim risk factors, such as gender and age, have not been validated.

Shared living arrangements and social isolation are the most salient environmental risk factors. Usually the perpetrator and victim reside together, a situation that can produce tension, conflict, and even mistreatment. The typical perpetrator is either the spouse (Pillemer & Finkelhor, 1988) or adult child (National Center on Elder Abuse, 1998; Teaster et al., 2006). Furthermore, there is evidence that perpetrators and victims tend to be either socially isolated or perceive themselves that way. This can mean there are few, if any, persons around to provide support, monitor the situation, or alert authorities when things go wrong. Other proposed environmental risk factors, such as family disharmony or crowded conditions, lack substantiation.

## PROBLEM RESPONSE AND FUTURE CHALLENGES

The potential effect of elder abuse and neglect on victims can have five dimensions: physical (such as injury and pain), behavioral (including helplessness and reduced coping), psychological (such as fear and anxiety), social (including dependence and withdrawal), and financial (such as loss of property and income). Research suggests that victims are more likely than nonvictims to

experience depression, distress, and suicidal thoughts. There is evidence, too, that they tend to die younger (Lachs, Williams, O'Brien, Pillemer, & Charlson, 1998).

The serious and complex nature of the problem means that elder abuse and neglect requires intervention across disciplines, systems, and approaches (Nerenberg, 2008). It is not surprising, therefore, that many organizations and communities establish multidisciplinary teams (Anetzberger, Dayton, Miller, McGreevey, & Schimer, 2005). Although their purposes vary, most seek to resolve difficult cases, identify service gaps or system problems, and advocate for legislation and new programs. Some teams have special foci, such as financial exploitation or fatality review. Most include representation from law enforcement, APS, mental health services, aging service providers, public guardians, and domestic violence advocates.

The need for case coordination and community collaboration also stems from the large number of organizations responsible for responding to elder abuse and neglect (Brandl et al., 2007). Those with federal or state authority include APS, civil and criminal justice, long-term care ombudsman, and public health. Others with useful services for victims or perpetrators include domestic violence and sexual assault programs, health care providers, the Aging Network, humane societies, mental health and substance abuse service providers, and caregiver advocates.

There is a race underway to better understand the dynamics of elder abuse and neglect and to identify effective strategies for preventing and resolving it. The aging of the baby boomers compels action on both fronts, because there is reason to believe that the problem will explode as this generation swells the ranks of older adults. Reasons for concern reflect characteristics of the baby boomers and changes in the larger society. For example, boomer tendencies to have fewer children, higher rates of divorce, and greater geographic mobility relative to earlier cohorts of older adults may translate into fewer available family caregivers and more neglect and self-neglect. Related societal changes may exasperate the situation. These changes include declining numbers of health care providers, particularly in long-term care, and dwindling public revenues to offer economic, medical, and social service support for an extended old age.

**SEE ALSO** Volume 2: *Domestic Violence;* Volume 3: *Caregiving; Crime and Victimization, Later Life; Loneliness, Later Life; Social Integration/Isolation, Later Life.*

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***Georgia J. Anetzberger***

## END OF LIFE DECISION-MAKING

Increased longevity and the aging of the baby boom generation are posing substantial challenges to society. The percent of the population aged 65 to 84 years is

projected to increase from 10.9% to 15.7% by 2050, an absolute increase of over 35 million people. Those 85 and older will increase from 1.5% (approximately 4 million) to 5% of the population, or nearly 20 million people (President's Council on Bioethics, 2005). However, while average life expectancy at age 65 has increased to over 20 years, only 11.9 of those years are expected to be healthy. After age 85, only one person in 20 is still fully mobile (Sharma, Chan, Liu, & Ginsberg, 2001).

Chronic illnesses, that is, conditions that tend to be long-lasting, persistent in their symptoms, and generally incurable, and including some cancers, organ system failure (primarily heart, lung, liver, or kidney failure), dementia, and stroke, are now the leading causes of death for Americans. Nearly all of the burden of illness and utilization of health care is now concentrated in the last few years of life when people generally live with established, serious chronic diseases and increasing disability that will eventually result in death.

The extension of the life course into very late old age, along with the increasing use of an array of high technology interventions, such as ventilators, cardiopulmonary resuscitation (CPR), and percutaneous endoscopic gastrostomy (PEG) tube for artificial nutrition, that can sustain life in many compromised states, presents individuals, families, and health care professionals with very difficult decisions about the timing and course of the dying process. For example, most people, when asked, would prefer to die at home. However, more than 80% of deaths in the United States occur in hospitals or nursing homes and often with aggressive high technology treatment (Lunney, Lynn, & Hogan, 2002). It is not always clear that these interventions are useful, wanted, or that their application always contributes to quality care or quality of life. An extensive number of end of life care studies indicate that the end of life is associated with a substantial burden of suffering among dying individuals and that there are important negative health and financial consequences that extend to family members and society (Steinhauser et al., 2000).

Traditionally, all medical treatment decisions were made by the physician, who was considered to have the necessary technical knowledge to make decisions regarding patient care. Decisions were based on the physician's assessment of the likely prognosis, risks and benefits of each option, and the physician's belief about the needs of the patient. However, underlying this paternalistic model of decision-making is the assumption that the patient may need to be protected from the facts or may not be capable of understanding the complexities involved in making medical care decisions. With the rise of consumer movements in the 1970s, this traditional model became outdated and the medical community moved toward a more patient-centered model of care focusing on shared decision-making.

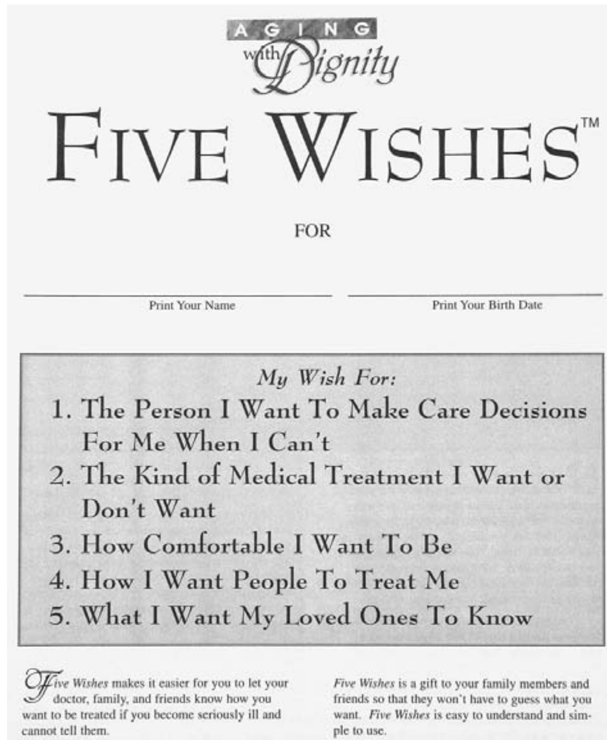
## PATIENT AUTONOMY AND PATIENT-CENTERED CARE

Patient autonomy and individual choice are core values in European bioethics and important components of patient and family-centered end of life decision-making (President's Council on Bioethics, 2005). Patient-centered care focuses on the patient's right to participate in making decisions about his or her medical care, and views the physician-patient relationship as a partnership (Gillespie, Florin, & Gillam, 2004). In this shared decision-making model, each participant brings a unique experience and expertise. The patient brings important values, beliefs, personal experience, culture, concerns, and desires, which are central to the decision-making process. The physician brings clinical knowledge, information about disease, treatment, outcomes, effects, risks, and benefits. Where there is an ongoing therapeutic relationship between a patient and a physician, a space for gradually exploring and sharing information, clarifying values, and developing consensus is possible. This process has benefits for both parties, with the patient becoming more empowered and the physician being able to provide the kind of care the patient wants. Where the patient can no longer speak for themselves, the family becomes the surrogate or substitute decision-maker.

## ADVANCE DIRECTIVES AND ADVANCE CARE PLANNING

Advance directives, and more recently, a more comprehensive approach to advance directives called advance care planning (ACP), have been promoted as the most practical means of ensuring patient autonomy and shared decision-making to assist the medical care system in providing quality end of life care (Lorenz et al., 2008). Advance directives are defined as a written instructional health care directive or appointment of an agent, or a written refusal to appoint an agent or execute a directive. In some, but not all, definitions, an advance directive also includes verbal instructions. A health care agent or surrogate is defined as an individual designated in a legal document, known as a durable power of attorney for health care (DPOAHC), who is designated to make a health care decision for the individual granting them power in the event of incapacity (e.g., coma, dementia, and so forth).

Advance directives began as simple requests to avoid medical treatments that would prolong life in undesirable conditions. They have evolved into increasingly complicated, detailed, and specific legal documents containing statements of patient preferences for an assortment of


AGING with Dignity

FIVE WISHES™

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Print Your Name | Print Your Birth Date

*My Wish For:*

1. The Person I Want To Make Care Decisions For Me When I Can't
2. The Kind of Medical Treatment I Want or Don't Want
3. How Comfortable I Want To Be
4. How I Want People To Treat Me
5. What I Want My Loved Ones To Know

*Five Wishes* makes it easier for you to let your doctor, family, and friends know how you want to be treated if you become seriously ill and cannot tell them.

*Five Wishes* is a gift to your family members and friends so that they won't have to guess what you want. *Five Wishes* is easy to understand and simple to use.

***Cover of Aging With Dignity's* Five Wishes.** *The* Five Wishes *document helps individuals express how they would want to be treated if they became seriously ill and unable to speak for themselves.* PHOTO BY TIM BOYLE/GETTY IMAGES.

medical treatments under hypothetical medical scenarios. In the early 21st century, all 50 states and the District of Columbia have addressed end of life issues, either by legalizing some form of advance directives, do not resuscitate (DNR) orders, checklists with yes-or-no treatment decisions by the individual regarding the use of life-sustaining medical technology (e.g., ventilators), do not hospitalize (DNH) orders, or by enacting alternative provisions for end of life decisions in the form of family consent, surrogacy, or succession laws that do not require a document to be signed prior to a loss of competency. In addition, the U.S. Congress passed the Patient Self-Determination Act (PSDA) in 1990, which gives legal force to living wills, establishes the legality of the appointment of substitute (e.g., surrogate) health care decision-makers, and allows the possibility of the withdrawal of life support (Brown, 2003).

Since their inception, advance directives have been the focus of intense academic research and broad societal discussion as providers, medical ethicists, policy makers, legislators, and the public have debated important questions concerning patient autonomy, quality of life at the end of life, and the withholding or withdrawal of life-sustaining treatments. In the best case scenario, the patient, family, and physician have held ongoing, comprehensive discussions about treatment options and preferences throughout the course of advanced illness and the individual's wishes have been documented in their medical record. In the absence of such discussions, health care providers or families are left having to choose what they think their loved one would have wanted concerning treatment without guidance from the individual.

However, contrary to widely accepted assumptions about the utility of advance directives, the research conducted to date on the impact of advance directives has generally shown that, despite two decades of legislation and advocacy, advance directive completion rates (that is, the number of people who fill out an advance directive form) remain low (ranging from 15% to 25%) and that advance directives have not been very effective in reducing unwanted aggressive medical treatments or costs at the end of life (Lorenz et al., 2008). End of life care often does not involve explicit, rational decision-making but rather is influenced by a variety of external factors, including the existing medical professional standards and guidelines for care, state and federal laws and regulations, and the financing systems of the health care systems the patient is being treated in; interpersonal factors, such as the patients' age, the nature of the patient's illness, the social, religious, and cultural value systems of participants, including health care providers; and medical care factors, such as the uncertainty of prognosis and the potential benefits and risks associated with various aggressive medical interventions.

Research has shown that few patients have end of life treatment discussions, either with their physician or with their family, and that if these discussions take place, they are often not documented in the medical record. Even when advance directives are executed, physicians are frequently unaware of them, they are not easily available to providers when needed, or they are invoked late in the dying process when the patient is hopelessly ill and actively dying. Advance directives are often too general or are inapplicable to the current clinical circumstances of the patient, or they are overridden by providers and family members. Complicating this situation is the instability of patient preferences; they change over time as the patient's circumstances change and participants, including health care professionals, are often uncomfortable using the rational, analytical decision approach inherent in the legal basis of advance directive documents, particularly amidst the complex and emotion-laden end of life situations. Finally, many patients, families, and providers do not want to face these hard decisions or are not prepared to give up on therapies aimed at cure and life-prolongation in order to focus totally on comfort and the relief of suffering (Lorenz et al., 2008; Street & Ottmann, 2006).

Clinicians, researchers, and advocates have developed new comprehensive, system and community-wide models of end of life planning that build on the original goals of autonomy and self-determination, while addressing the identified shortcomings of advance directives, to better meet the needs of patients and families. Advance care planning (ACP) is defined as a comprehensive and longitudinal process of communication and shared decision-making as circumstances change between the patient, family, and health care providers to determine the patient's goals of care (e.g., from prevention to attempts at cure, or from life prolonging interventions to the use of comfort measures and a focus on the relief of suffering). Many of these ACP models have demonstrated reductions in unnecessary hospitalizations and aggressive care at the end of life, an increase in care that is more consistent with patient goals, and the reduction of caregivers' anxiety, depression, and burden in both hospital and nursing home settings (Lorenz et al., 2008).

### DIRECTIONS FOR THE FUTURE

Though encouraging, these programs have yet to be rigorously evaluated and, while highly successful in terms of completion rates for ACP documents and compliance of end of life care to documented wishes, it is not clear from the methodologically weak and limited research conducted to date which program or contextual variables are the salient features of these program's success. There are a number of ethical, programmatic, conceptual, policy, research, and methodological issues concerning advance care planning and shared decision-making that have yet to be resolved and require continued research—including why advance care planning works when it does, what components of successful programs contribute most to its success, and why it often fails.

In addition, further research is needed on the applicability and utility of advance care planning in various patient populations (such as the elderly, younger and disabled people, ethnically and culturally diverse populations, and so forth); settings (e.g., intensive care units, nursing homes, residential care facilities, or hospitals); and circumstances (of healthy individuals, those with advanced illness, and those facing the end of life). Efforts to date suggest that advance care planning holds great promise, but future efforts should be based on the most successful models. These approaches should integrate change at the community level (e.g., provider practice patterns, institutional protocols, and consumer involvement) with structures and mechanisms at the state and federal level (e.g., legal and health care facility regulations and the financing of care promoting ACP) to facilitate shared decision-making and continuity of care. More flexible legal instruments, the naming of a proxy/surrogate, an emphasis on patient/family/provider communication, and advance care planning educational and skills training tools that support the end of life decision-making process can best inform care in a clinically relevant way.

**SEE ALSO** Volume 3: *Death and Dying; Health Care Use, Later Life; Hospice and Palliative Care.*

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## EPIDEMIOLOGIC TRANSITION

Relatively recent historical changes in patterns of death and disability have made fundamental changes in the trajectory of the life course. During the 19th and 20th centuries, most countries experienced a substantial decline in mortality from infectious disease, with a resulting increase in deaths from chronic conditions. One theory of the historical processes of change that describes these shifts in patterns of morbidity and mortality is known as the epidemiologic transition. This theory is relevant to life-course research because of its implications for the aging process and the timing of important

life-course transitions related to schooling, marriage, reproduction, and retirement.

## CLASSICAL THEORY OF THE EPIDEMIOLOGIC TRANSITION

The epidemiologic transition as it originally was conceptualized by A. R. Omran (1971) describes recent rapid declines in mortality as a process by which pandemics of infectious diseases (such as influenza) gradually were replaced by degenerative diseases (such as arthritis) and human-made diseases (such as some cancers and heart disease) as the primary causes of morbidity and mortality. According to Omran, the theory of the epidemiologic transition is focused on "the complex change in patterns of health and disease *and* on the interactions between these patterns and their demographic, economic and sociologic determinants and consequences" (Omran, 1971, p. 510).

Omran divided the epidemiologic transition into three historical stages, which he labeled the age of pestilence and famine, the age of receding pandemics, and the age of degenerative and human-made diseases. During the age of pestilence and famine, mortality rates were high and average life expectancy at birth was 20 to 40 years. That stage lasted until the late 17th century for most Western nations and was characterized by death rates that fluctuated greatly in response to periodic occurrences of epidemics of infectious diseases. The leading causes of death included pneumonia, influenza, smallpox, tuberculosis, and other infectious diseases.

The age of receding pandemics was characterized by a sudden rapid and then steady decline in mortality caused by a decrease in epidemics of infectious disease. As those epidemics receded, death rates began to show less fluctuation and average life expectancy increased to around 50 years. The risk of death from infectious diseases was highest among infants, children, and women of reproductive age, because these groups tended to have weaker immune response and because women and infants often died during childbirth. Thus the epidemiologic transition favors the young over the old and women over men in terms of survivorship. In Western nations the mortality decline began during the late 1700s and continued until the early 19th century. Mortality declines in other countries began at various points in the 18th and 19th centuries.

During the age of degenerative and human-made diseases, mortality continued to decline, though less rapidly than it had in the prior stages, and eventually stabilized at relatively low levels toward the end of the transition. With a decrease in mortality at younger ages, more of the population survived to contract diseases associated with middle age and old age. Thus during that period the leading causes of death shifted to the chronic degenerative diseases that characterize the middle and older ages, such as heart disease, stroke, and cancer. As a result of these improvements in survivorship, life expectancy reached 70 years, with little expectation of further improvement.

## VARIATION IN TRANSITION EXPERIENCE

Although dramatic declines in mortality have occurred globally, the specific experience of the epidemiologic transition varies across nations. Omran (1982) proposed four models of epidemiologic transition to account for variations in the pattern, determinants, and consequences of the transition: the Classical (Western), Accelerated, Delayed, and Transitional Variant of Delayed models.

The Classical (Western) model describes the experience of industrialized countries such as the United States, Great Britain, and most other Western European countries. This model is characterized by a gradual transition from high to low mortality rates that accompanied the process of modernization and began as early as the 1750s. In this model, declines in mortality are attributed primarily to economic development, improvements in food supply and nutrition, and advances in sanitation and hygiene. Medical advances are thought to have played a minor role in the initial transition to low mortality, though, as noted by J. B. McKinlay and S. M. McKinlay (1977), the stabilization of mortality at low levels during the third phase is probably attributable to the development of medical technology.

In the Accelerated model, the transition to low mortality occurs in a shorter period and does not begin until the 1850s. Accordingly, the shift to degenerative and human-made diseases also occurs much more swiftly. In addition, the increases in the survival rates of children and young women that are typical of the Classical model occur over shorter periods. As in the Classical model, the primary determinants of the transition are socioeconomic improvements, along with technological and medical advances. This model describes the transition experience in Japan, Eastern Europe, and the former Soviet Union, where the process of modernization occurred in a relatively short period.

The Delayed model describes the relatively recent and incomplete transition experienced by most developing countries. In these countries substantial declines in mortality did not begin until after World War II. Mortality rates among infants, young children, and women of reproductive age did not decline as dramatically as in the Classical and Accelerated models. In fact, mortality declines have begun to recede in most countries, with life expectancy reaching only about 55 years. The

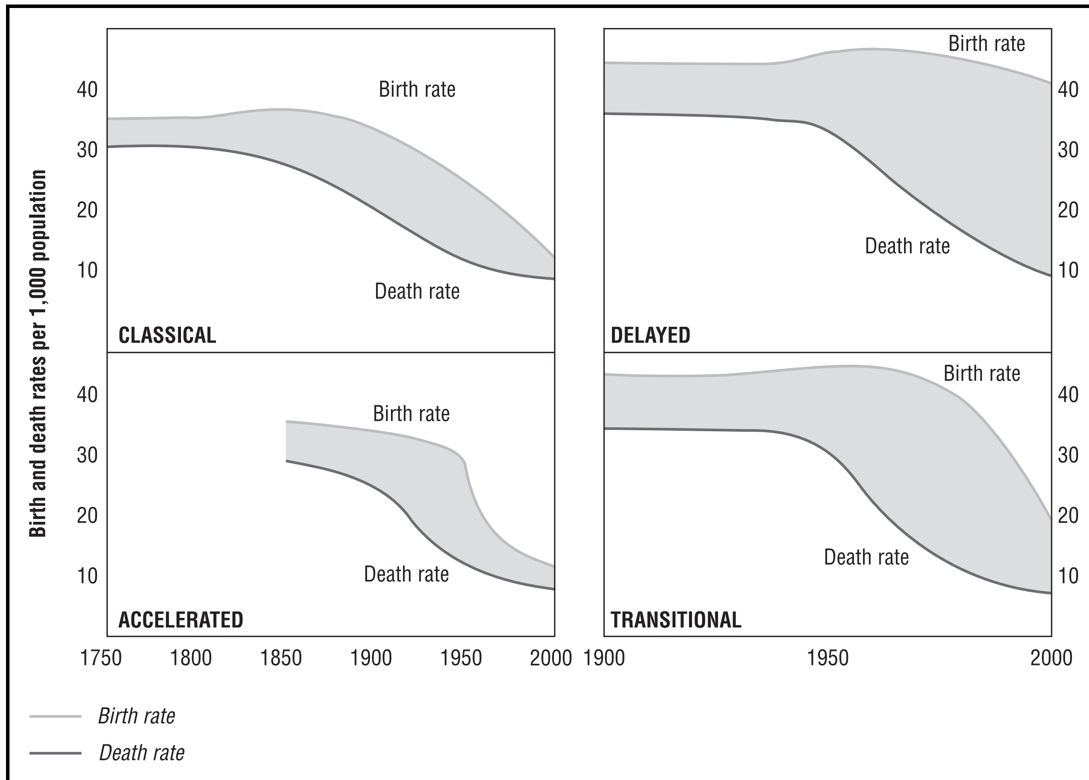


*Figure 1. Models of the epidemiologic transition.* CENGAGE LEARNING, GALE.

decreases in mortality that have occurred are due primarily to medical interventions such as vaccines and public health measures aimed at disease control. Further declines in mortality are not expected to occur until economic and social infrastructures are improved. This model typifies the experience of India and most countries in Africa and Latin America.

The Transitional Variant of the Delayed model has been proposed to describe the experience of countries that have had a delayed transition but where the mortality decline did not lessen to the same extent as in the delayed model with consistent declines in mortality. These countries have the necessary infrastructure, in terms of health-care delivery, to experience sustained declines in mortality. Countries with this transition experience include South Korea, China, and Jamaica.

## CONSEQUENCES FOR POPULATION DYNAMICS

A central proposition of epidemiologic transition theory is that mortality is the main driver of population dynamics. The dramatic decline in mortality from infectious diseases has had a significant impact on population dynamics. A fundamental characteristic of the epidemiologic transition is the shift in the age pattern of mortality. The decrease in infectious disease mortality primarily benefited children and young women, increasing their chances of surviving to middle and older ages. This shift in the age pattern of mortality has had implications for population growth, population aging, and sex differences in survival.

Before the epidemiologic transition both mortality and fertility rates were high, resulting in minimal increases in population sizes. For some time after mortality began to decline, fertility rates remained high, producing an explosion in population growth. During that period, as A. J. Coale (1974) notes, populations grew much faster than they had in earlier human history. In countries that have completed the epidemiologic transition, the declines in mortality eventually were followed by similar declines in fertility. For some countries, such as Italy and other Western European countries, fertility rates eventually fell to below replacement levels. (Women must have, on average, 2.1 children over the course of their childbearing years to maintain population levels.) This phenomenon, which is referred to as the second demographic transition, has resulted in negative population growth in those countries except when immigration has offset the effect of low fertility, as has been the case in the United States. In contrast, in countries experiencing a delayed transition, the decline in fertility has not

matched declines in mortality. These countries have experienced sustained population growth, with countries such as India and China experiencing overpopulation.

In addition to overall population growth there have been increases in the population of specific age groups. As a result of the epidemiologic transition, for the first time the human population as a whole has been growing older, as S. J. Olshansky, B. A. Carnes, and A. Désesquelles observe (2001). As mortality from epidemics of infection declined, the leading causes of death shifted to chronic diseases that emerge in middle and later adulthood. Initially, declines in infant, child, and maternal mortality make the population younger, but this improved survival ultimately leads to a drop in births rates and the beginning of population aging. For some countries, such as the United States and Japan, the population has aged dramatically in a relatively short period.

Shifts in the pattern of mortality also have resulted in changes in the sex composition of the population. Changes in cause-specific death rates that accompanied the epidemiologic transition favored women over men. Decreases in maternal mortality resulted in improved survival among women. Men, in contrast, are slightly more susceptible to cardiovascular disease and cancer, two of the leading causes of death that have emerged in the age of human-made degenerative diseases. The male mortality disadvantage is primarily a product of the less healthy life styles of males in terms of diet, risk-taking behavior, health-care utilization, and so on. Thus improvements in life expectancy that result from the epidemiologic transition benefit women more than men.

## SIGNIFICANCE FOR LIFE COURSE TRANSITIONS

The increased life span resulting from the epidemiologic transition has had significant implications for life-course transitions related to schooling, marriage, reproduction, and retirement. The timing of life events depends partly on the average number of years people can expect to live. Increased life expectancy allows individuals to delay life events and increases the chances that individuals will experience certain life events. For instance, the increase in longevity among women and children enabled women to delay childbearing and marriage and spend more of their lives obtaining an education and participating in the labor force. The increased survival of infants and children meant that women could have fewer children than in the past and be assured that most, if not all, of their children would survive to adulthood. When this was combined with increases in their own survival rates, women were able to postpone childbearing and have fewer children.

A longer life span has allowed both men and women to devote more years of their lives to schooling, which in turn may increase life expectancy, and has resulted in more time spent in the workforce. Whereas most of the population did not survive to middle and old age before the epidemiologic transition, the increased longevity that followed the transition has resulted in more of the population experiencing a relatively recent but important life-course transition: retirement. Before the epidemiologic transition, life course transitions related to older age were not experienced by most of the population. Because life expectancy has increased throughout the population, transitions related to older age, such as retirement, have come to be recognized as important stages in the life course.

## RECONCEPTUALIZING CLASSICAL EPIDEMIOLOGIC TRANSITION THEORY

In its original conceptualization, the theory of epidemiologic transition assumes that populations that have completed the transition have achieved a lower limit to mortality (i.e., the risk of death is as low as it can be) and an upper limit to longevity (i.e., the average life expectancy is as long as it can be). This is the case because traditional epidemiologic theory focuses on mortality declines that benefit the young. Because mortality rates among infants and children probably cannot be lowered further, additional increases in life expectancy necessarily will come from mortality declines at older ages. Indeed, after completing the classical epidemiologic transition, many countries experienced further declines in mortality at middle and old ages. To explain continued declines in mortality and increases in longevity, classical epidemiologic transition theory has been reconceptualized to include a fourth stage, the age of delayed degenerative disease, as described by Olshansky and A. B. Ault (1986), and a fifth stage, the age of slowing of senescence, as described by S. Horiuchi (1999).

The age of delayed degenerative diseases describes more recent developments in the epidemiologic experience of populations considered to have completed the classical epidemiologic transition. From the 1950s to the 1970s many countries experienced a decline in cardiovascular and cancer mortality. Classical epidemiologic transition theory emphasizes gains in life expectancy that result from reductions in mortality at younger ages. However, reductions in cardiovascular and cancer mortality occurred primarily among those of middle and older ages, and those declines pushed the upper limit of life expectancy.

A recent development in mortality transition, the age of slowing of senescence, describes reductions in mortality at older ages. Declines in mortality from cardiovascular disease and cancer result in more of the population

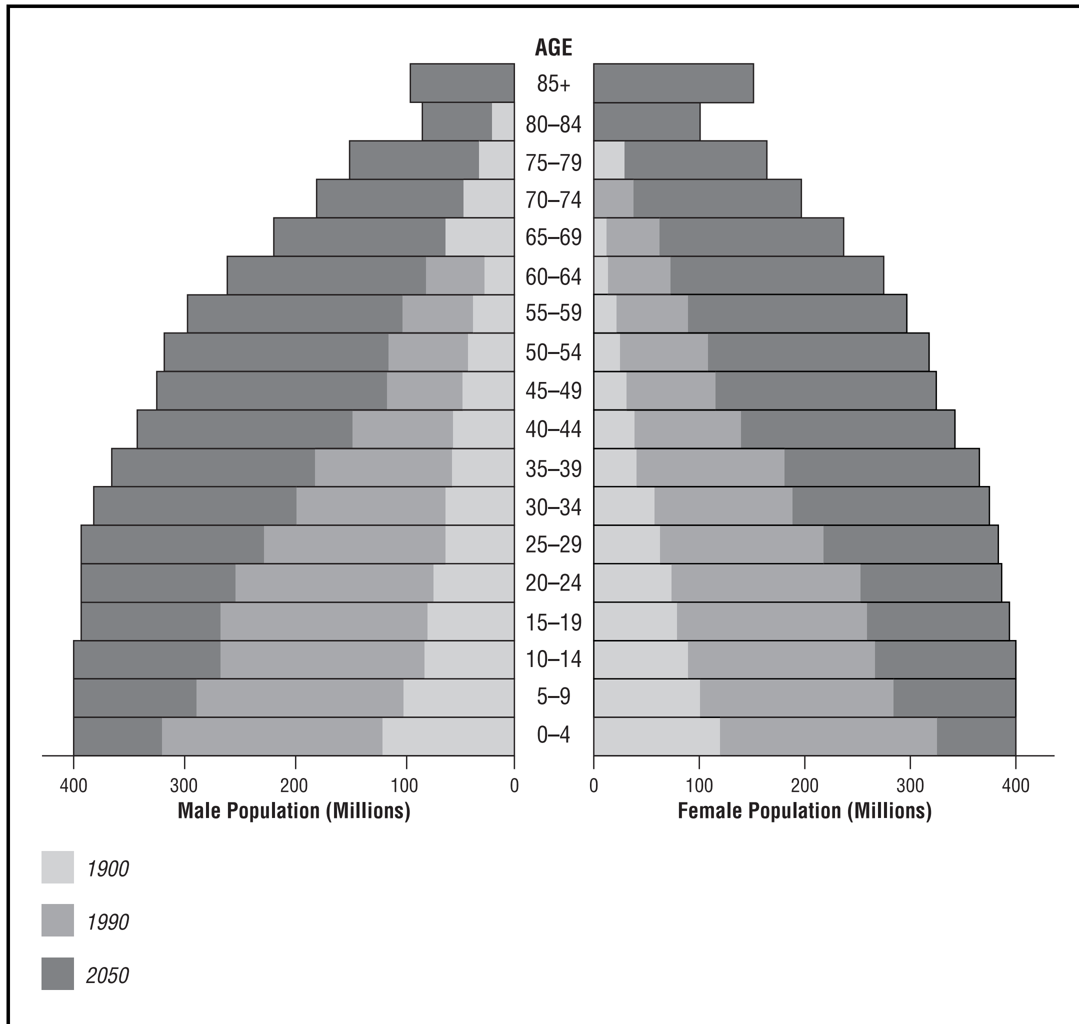


***Figure 2.*** *Since 1990 age structure has become wider and more rectilinear because relatively larger numbers of people in the growing population are surviving to older ages. By the middle of the 21st century it will be very nearly rectangular.* CENGAGE LEARNING, GALE.

surviving to an advanced age. Thus further increases in life expectancy can occur if mortality declines among the elderly. For mortality to decline among the elderly, deaths from old-age physiological frailties would have to be delayed until even later years of the life course. Although there is debate about the biological limits to human longevity, it is clear that a slowing of senescence would push the limits of longevity further, as the work of J. F. Fries (1980); V. Kannisto, J. Lauitsen, A. R. Thatcher, and J. W. Vaupel (1994); J. Oeppen and J. W. Vaupel (2002); and Olshansky et al. (2001) demonstrates.

## THE FUTURE OF THE EPIDEMIOLOGIC TRANSITION

Trends in morbidity and mortality have prompted researchers to address two major limitations of the classical epidemiologic transition theory. First, the theory assumes a unidirectional experience of declining mortality with no attention to the possibility of reversals in the transition to low mortality, as occurred in the former Soviet Union following an economic transition and the resulting health-care finance crisis. Second, the theory was formulated to describe population-level trends in morbidity and mortality. Thus substantial between-group variation in the transition experience within countries has not been explained fully.

Several trends in disease and mortality are not accounted for in classical epidemiologic transition theory. For instance, as noted by R. Barret, C. W. Kuzawa, T. McDade, and G. J. Armelagos (1998), there has been a reemergence of pandemics of infectious disease. HIV/AIDS has increased age-specific mortality in parts of Asia

and Africa as well as in some industrialized countries, such as the United States. Furthermore, there is evidence of a global reemergence of infectious diseases, such as tuberculosis, that were thought to be under control. In addition to increases in epidemics of infectious disease, epidemics of noncommunicable disease have emerged. For instance, a significant number of premature deaths in both developed and developing countries can be attributed to smoking-related mortality, as M. Ezatti and A. D. Lopez (2003) note. In addition, there is growing evidence, as B. M. Popkin and C. M. Doak (1998) observe, of the emergence of a global epidemic of obesity that has implications for population health.

These reverse transitions or countertransitions do not fit within the traditional theory because of an implicit assumption of unidirectional transition experience. Furthermore, many developing countries are experiencing a double burden of disease. In these countries mortality rates are high for both communicable and noncommunicable diseases. This burden makes it difficult for those countries to continue to develop in ways that ultimately would improve the health of their populations.

Because the epidemiologic transition focuses on population-level trends in morbidity and mortality, variation within populations tends to be overlooked. The rate of change and the underlying causes of the transition differ among subgroups of the population. For instance, although there has been a rapid and general decline in adult mortality, socioeconomic and racial inequalities have been maintained if not widened, according to R. G. Rogers (1992) and J. Vallin (1980). In addition, the long-term downward trend in U.S. infant mortality has not benefited Blacks and Whites equally. Not only has the disparity persisted, it has increased and is not expected to diminish, as noted by G. K. Singh and S. M. Yu (1995) and I. W. Eberstein and J. R. Parker (1984). Differences in transition experiences among subgroups within populations have produced significant inequalities in health and mortality. Further research is needed to understand the origins of these inequalities.

The epidemiologic transition describes the global historical transition from very high and fluctuating mortality to low and stable mortality. However, populations continue to experience changes related to morbidity and mortality. Thus, the classical epidemiologic transition theory needs to be updated continually in response to changing trends in diseases and death.

**SEE ALSO** Volume 3: *Chronic Illness, Adulthood and Later Life; Demographic Transition Theories; Global Aging; Population Aging; Mortality.*

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## FAMILY AND HOUSEHOLD STRUCTURE, LATER LIFE

Throughout the life course, individuals commonly turn to family members for help when faced with instrumental, emotional, financial, or other types of needs. Although many exchanges of support occur between family members who do not live together, intensive support is facilitated by family members choosing to live in the same household. The ways in which families and households are structured can provide insights into the multidimensional layering of exchanges and attachments that bind family members to one another.

At every stage of the life course, family and household structure evolves in response to changes in family membership and roles, economic resources, and needs for support and assistance. Life course events experienced by an individual, such as changes in marital status or having children, frequently result in changes in the composition of one's household. Events and experiences occurring to others, however, can also impact an individual's household composition. Because individual life trajectories are interconnected with the trajectories of others in one's network, the life course events experienced by close family members may trigger a reconfiguration of living arrangements. For example, an older woman living with her adult daughter may be thrust into a three-generation household if the daughter has a child. Similarly, a frail married woman living with her husband may become widowed and move in with her single "young-old" daughter, transforming her daughter's living situation into a two-person household. The cascading sequences of demographic, social, and economic events experienced by individuals, as well as by others who are close to them, shape family and household structure.

### THE SIGNIFICANCE OF FAMILY AND HOUSEHOLD STRUCTURE

A *household* is defined as the group of individuals who collectively occupy a housing unit (that is, the people who live together in the same home or apartment). The concepts of family and household are closely linked because the vast majority of households are composed of family groups. Only a relatively few people share living quarters with nonrelatives, especially in later life. For example, in 2000 only 3% of individuals aged 65 and over lived exclusively with nonrelatives, a category that includes boarders, roommates, and cohabiting partners. A far larger share of older people—28% in 2000—live alone in a single-person home. Aside from the 6% of older people who live in group quarters such as nursing homes, the rest of the older population, totaling 63% or roughly 22 million people aged 65 and over, share a household with family members (figures calculated based on the Public Use Microdata Sample of the 2000 U.S. Census). This entry focuses on family relationships as they overlap with household relationships among older people. Other entries in this volume report on key family relationships in later life that transcend household boundaries, including relationships with adult children, grandchildren, and siblings.

Household composition has been described as "one of the most basic and essential determinants of the well-being

of older adults" (Zimmer, 2003, p. 248), with implications for their economic, physical, and psychosocial well-being. At a minimum, households are economic units, sharing shelter as well as many other resources. Household members, especially those who are related to one another, often pool finances for food and other expenses. The economies of scale realized through sharing living quarters can result in an improved quality of life for older adults, as well as for those with whom they live.

Members of the same household support one another in a variety of noneconomic ways as well. Those who are disabled may receive assistance with activities of daily living (e.g., bathing, dressing) or instrumental activities of daily living (e.g., managing finances, taking medications), effectively forestalling the need for nursing home care. Older individuals in a multigenerational household may support younger family members by providing child care or other services. Indeed, living arrangements may be considered the most visible, though not the only, social indicator of familial embeddedness, support, and solidarity across generations.

## CONCEPTUAL ISSUES UNDERLYING HOUSEHOLD AND FAMILY STRUCTURE

One conceptual theme informing the understanding of household and family structure in later life involves the tension between independence and familial interdependence or mutual support. Just as leaving the parental home and establishing a home of one's own signals adult independence among young adults, relinquishing one's own home by moving in with family members, moving to assisted living, or entering a nursing home may be experienced by many older individuals as a signal of dependency. One of the tasks of the intergenerational family is to facilitate the efforts of different generations to achieve a balance between independence and mutual support, as played out in residential choices. Strong family solidarity may result in the obligation to support dependent family members through coresidence, even when the pull toward independence is strong.

A related theme relevant to any discussion of family and household structure is that of reciprocation, or the give and take of family relationships. Family members are in need of different types of help and support at various stages of the life course, and may experience high levels of dependency at some points but not at others. With the provision of assistance to a family member comes the expectation that help will be reciprocated—if not immediately, then in the future, and if not from the family member who was helped, then from another participant in the family "support bank" (Antonucci, 1990). These interdependencies, and the associated norm of reciprocation, imply that aging family members will make residential choices taking into account both the network members on whom they can rely for help and those members who are counting on them for support.

Perhaps the most enduring theoretical approach to conceptualizing household structure in later life assumes a rational evaluation of living arrangement options in light of preferences, resources, and the availability of alternative opportunities (Burr & Mutchler, 1992; Wolf & Soldo, 1988). Rational choice theory assumes that older people engage in an ongoing evaluation of their living circumstances with respect to their preferred goals. Alternative living arrangement opportunities are assessed in light of the resources that affect one's ability to maintain or alter one's residential setting. In practice, this evaluation likely occurs primarily at key life course transition points. Events most likely to prompt a reevaluation of household structure include a change in family circumstances such as the death of a spouse, or a change in personal resources such as the onset of disability.

Greatly complicating decisions about household structure is the fact that any given household is the result not only of the choices made by a single individual but also potentially of multiple individuals' opportunities, preferences, and constraints. Those who are married or partnered evaluate and respond not to a single set of conditions but to both partners' sets of constraints and preferences. Household decisions may reflect intergenerational decision making as well. An older couple may be capable of living as a pair and satisfied doing so, but their adult daughter may need to live with them because she is unable to make ends meet in an independent household. An older widow may prefer to live alone, but her children may feel strongly that she lacks the physical capability to do so and pressure her to live with them. Acknowledging the linked decision making that occurs throughout the family system and that shapes household composition is a challenging but critical part of understanding living arrangement patterns in later life.

**Preferences** The choices that people make about where to live and whom to live with are typically described as partially a function of preferences or "tastes" for various living arrangements (i.e., what living arrangements would provide the greatest satisfaction?). Social scientists acknowledge a general preference for independence in living arrangements. All else being equal, older people in the United States prefer to live alone or exclusively with a spouse or partner, once their children are grown. Living with adult children or other relatives, or moving to a nursing home, is considered less preferable (Shanas, 1979; Wister & Burch, 1987). Given the growing cultural diversity of the older population, this assumed preference for living alone or with a spouse only has been

called into question. Indeed, research has demonstrated considerable variability in living arrangement preferences and in perceptions of obligation to share living quarters across generations (Burr & Mutchler, 1999; Lee, Peek, & Coward, 1998). Attributes such as race, ethnicity, immigration history, and level of acculturation appear to shape these preferences and predispositions (Angel, Angel, & Himes, 1992; Burr & Mutchler, 1993b). Moreover, research in Asian and Latin American countries suggests that the cultural underpinnings of preferences for intergenerational coresidence may be breaking down. For instance, increasing numbers of seniors in Japan and China express a preference for living independently (Logan, Bian, and Bian, 1998; Takagi, Silverstein, and Crimmins, 2007).

**Availability of Alternatives** Household composition choices also reflect the availability of others with whom to live (i.e., are there family members or others with whom a shared residence could be established?). Life course trajectories and events are critical in shaping these choices. Older individuals who do not live alone most typically live with their spouses, with their adult children, or with both. As such, demographic events occurring throughout the life course, such as marriage and union formation, union dissolution, and childbearing, largely determine the availability of others with whom one could live. Individuals who never married or who divorced and did not remarry do not have a spouse with whom to live in old age, and are far more likely to live with other relatives or alone. Individuals who have several children are more likely to have at least one with whom they could live compatibly.

Availability of alternatives is also a function of processes of geographic dispersion within the family system. Adult children move away from the communities in which they grew up, leaving their aging parents behind. Many retirees relocate to the Sun Belt or other "amenity" destinations, leaving the communities in which extended family members and support networks are established. Geographic mobility results in aging adults and their extended family members often being geographically separated. When older individuals who are geographically distant from family care networks become frail, widowed, or in need of more assistance, they may move to be closer to (or live with) support networks such as adult children (Litwak & Longino, 1987). Together, the life course processes associated with marriage, marital dissolution, having children, dying, and geographic mobility that occur in the lives of older individuals and in the lives of their close family members combine to define the living arrangement options available to an individual at any given time.

**Resources** Household composition decisions are based also on the financial and other resources available to the older individual. Sufficient economic resources are necessary to live independently; these resources are strongly shaped by life course trajectories earlier in life. The accumulation of assets, such as an owned home and a private pension, is shaped by decisions made earlier in life about educational attainment, employment, and consumption. Individuals who obtain higher levels of education and who develop a stable and well-compensated work career are more likely to reach old age with resources that facilitate realizing their living arrangement preferences. In contrast, those with unstable or poorly compensated lifetime work careers may have even fewer resources in later life. Those with low levels of economic security may be unable to maintain an independent household and may have no choice other than to live with extended family members or others.

Health and disability levels also represent resources that factor into living arrangement decisions. Nominal needs for assistance associated with health declines may be readily met through services provided in an older individual's home by family members living nearby, or by paid or volunteer service organizations. Should the needs of the elderly individual be so extensive that he or she cannot be left alone or if needs for assistance occur routinely throughout the day and night, a reconfiguration of the household may be required. The highest level of disease and disability burden is likely to precipitate a move to a nursing home, especially if family members are unable or unwilling to facilitate support within the community.

**Environment** Features of the environmental context may also shape household and family structure in later life. A home that adequately met the needs of a couple for many years may no longer be suitable when they are unable to manage stairs, for example. Evolving challenges in the environment may be countered by making changes to the physical environment, such as renovations that allow a person to live on a single level. Environmental challenges may be met instead through moving to a more suitable environment, where suitability is judged both by the physical features of the living situation and by the social support available. The process of adjusting one's living circumstances to one's current physical capacity, or optimizing "person–environment fit" (Lawton, 1982), can increase independence and allow the aging individual to avoid the exacerbation of disabilities. Indeed, the biopsychosocial model of disability, one example of which is the International Classification of Functioning, Disability, and Health (ICF) put forth by the World Health Organization (WHO, 2002), points out that health conditions and functioning need not result in

limits on participation or activity if the environment is adequately supportive. Paradoxically, making social support available within the household environment is one vehicle through which participation and independence may be facilitated.

An additional line of research suggests that features of the community may enter into decisions about household composition. A shortage of housing, high housing costs, and other features of the housing environment may limit the range of housing choices available to older adults as well as to their families. If housing costs—including not only rent or mortgage but also taxes, utilities, and other related costs—are excessively high in a community, then older adults may view opportunities to live with extended family members more favorably. Indeed, younger relatives in the same high-cost community may have few alternatives to living with older relatives. One study established empirically that older individuals and couples who live in high-cost housing markets are more likely to live with other adults; the same study suggests that older single persons who live in communities with lower median rental costs for small apartments are more likely to avoid institutionalization (Mutchler and Burr, 2003). Thus environmental and cost-of-living factors that are beyond the control of families may also shape household structure in later life.

**Mutual Exchange** The formation of extended family households, especially coresidence between aging parents and their adult children, is an important alternative to living alone or solely with a spouse. The extent to which grown children can serve as resources for frail older parents, including contemplating sharing living quarters, depends not only on the needs and resources of the parents but also on the characteristics and life stage of the adult children. Some literature points specifically to the ambiguity in establishing who is being helped in intergenerational households (Choi, 2003; Speare and Avery, 1993), with most empirical literature suggesting that adult children are often the recipients of support in these households rather than the providers of care, except when the parent is very old or suffers from severe functional limitation.

Yet the exchanges occurring within the household involve many different currencies, including not only financial support but also instrumental assistance and other forms of care. For example, an older man may be able to afford living alone, yet he might not be able to keep his home in good repair unless his son lives with him. An older widow may be financially supported by her son and his wife, with whom she lives. Yet her days may be spent caring for the home and for her grandchildren, allowing her son and his wife to work long hours. The reciprocity embedded in such exchanges occurring within the intergenerational household makes it difficult to determine why the household was formed, who is benefiting the most, and how enduring the arrangement will be.

The well-being of older adults is affected in both tangible and symbolic ways by the composition of the families and households within which they are embedded. Coresident family members such as a spouse, adult children, or other relatives can be important sources of social support, instrumental help, and economic assistance. As well, the help and support that older people provide to the people with whom they live—for instance, providing child care within a three-generation household or caring for a disabled loved one—can bring satisfaction and purpose to their lives. Yet the values of independence and privacy are strong in many segments of American society, and these values tend to support the goal of smaller, more individualistic households. Ultimately, the implications of family and household structure for well-being reflect the balance of these disparate practical and symbolic elements that together shape the formation and maintenance of different kinds of households.

## TRENDS AND PATTERNS IN HOUSEHOLD AND FAMILY STRUCTURE

Perhaps the most notable trend in household and family structure in later life is the rising prevalence of living alone. Throughout the last half of the 19th century, and several decades into the 20th, fewer than 10% of all individuals aged 65 and over lived alone (see Figure 1a). By 1950, 10% of older men and 17% of older women were living in one-person households; rates rose decade by decade until 1990, when 16% of older men and more than 40% of older women were living alone. (These calculations are based on individuals living in households and exclude those living in group quarters such as nursing homes, prisons, and the like.) Historians and others debate the relative significance of demographic factors, preferences, and economic resources in shaping this increase, although it is clear that all three sets of factors contributed to this trend. The concurrent timing of the upturn in rates of living alone in the mid-20th century, and the expansion of the Social Security system, supports the contention of some that the rising ability to "purchase privacy" accounts for part of the upswing (Burch and Matthews, 1987; Kobrin, 1976). Demographic changes in marriage and childbearing, along with the well-established gap in expectation of life between men and women, are also significant (Kramarow, 1995). Indeed, among older men and women who are not currently married (most of whom are widows or widowers), the propensity to live alone is quite similar albeit at higher levels throughout the time period considered, rising to approximately 65% by 1990 (see Figure 1b).

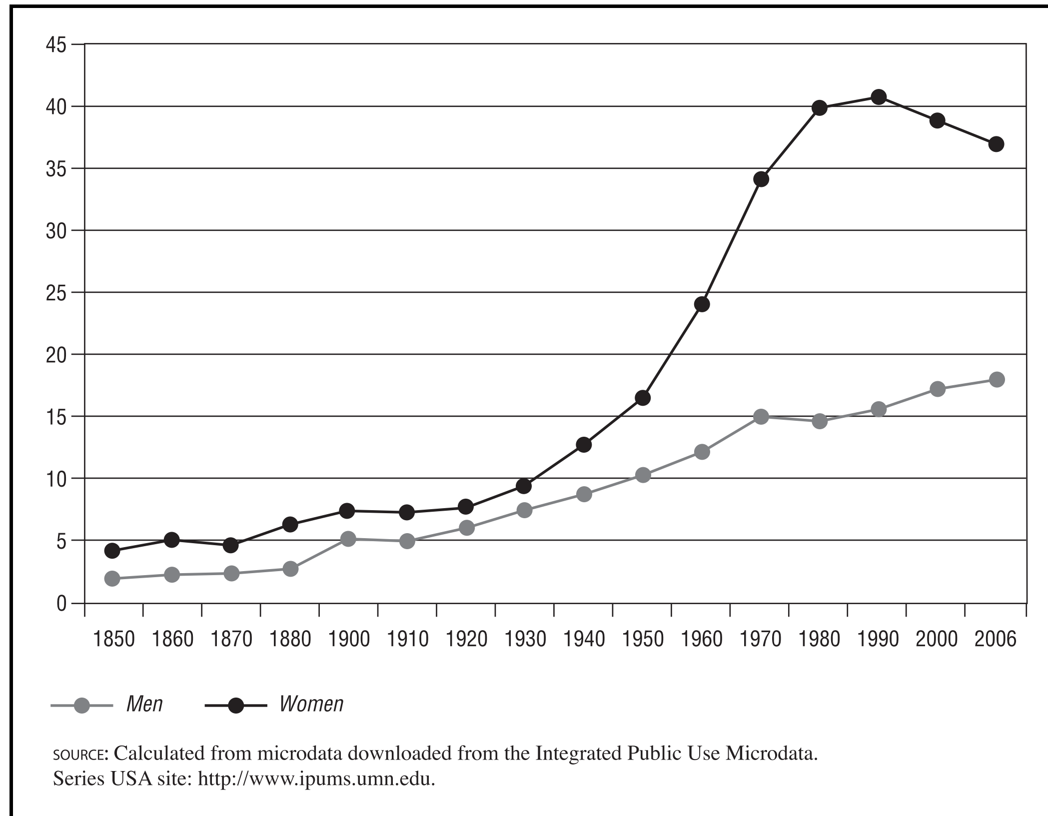


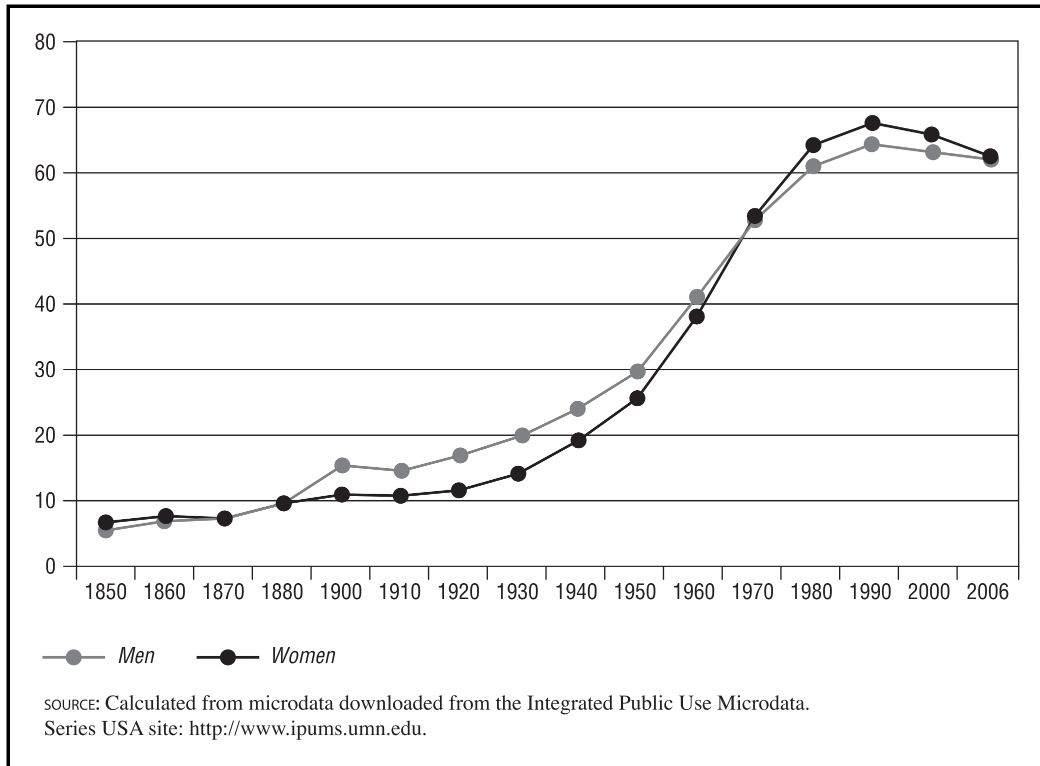

***Figure 1a.*** *Percentage living alone by year and gender, age 65+ only, living in the community.* CENGAGE LEARNING, GALE.

The sizable gender gap between rates of living alone between men and women shown in Figure 1a, a gap that is especially pronounced during the latter decades of the 20th century, is almost entirely the result of the far higher likelihood of older women to have outlived their spouses.

Some investigations by historians have suggested that intergenerational living—that is, three or more generations coresiding under the same roof—was considered desirable in the preindustrial United States, even though it was not commonly observed because demographic conditions made it unlikely that three or more generations in the same family were alive at the same time (Ruggles, 1987). Although demographic conditions in the early 21st century support a situation where three, four, and even five generations are alive at the same time in many families (Matthews and Sun, 2006), intergenerational coresidence occurs at relatively low levels in the United States. The empirical finding that most seniors do live alone or exclusively with a spouse suggests that independent living in later life is indeed viewed favorably by many seniors.

Figures presented in Table 1 show the living arrangements experienced by the population of older individuals in the United States in 2000, as well as within demographic segments of the older population. These tabulations are based on microdata from the U.S. Census of Population and Housing and reflect both composition of the household and whether or not the older individual is the household head. Household headship is assigned to the individual in whose name the home is rented or owned. In these tabulations, both the person listed as the householder and his or her spouse are considered to be ''heads of household.''

For the entire population aged 65 and over, 70% live in so-called independent households—the older person alone or with his or her spouse only. (Note that these percentages include a small number of seniors—less than one-half of 1%—who also live with their own child under the age of 18.) Another 16% is head of a household that includes other people, most typically the older person's adult child(ren) and/or grandchild(ren). Fewer than 10% are living in the household of someone else (that is, not head of household), and just 6% live in group quarters such as nursing homes, prisons, or mental institutions. Older persons not living alone or exclusively with a spouse will most typically be living with an adult child either in their own home or in the home of the child. For the sample as a whole, fewer than 2% of the seniors live in a household that




SOURCE: Calculated from microdata downloaded from the Integrated Public Use Microdata. Series USA site: http://www.ipums.umn.edu.

***Figure 1b.*** *Percentage living alone by year and gender, age 65+ only, not married only, living in the community.* CENGAGE LEARNING, GALE.

includes one or more siblings, and fewer than 3% live in a household including another relative, such as a cousin, a niece, or a parent (data not shown).

The pattern of household structure presented here suggests that for the older population as a whole, household headship and independent living are typical. Preferences for independent living, supported by relatively good health and adequate economic resources, commonly result in older persons living on their own in an independent household. "Pseudo-coresidence," or having children live geographically close by but not actually in the same housing unit, can facilitate independent living arrangements even when needs for assistance are high (Zimmer, 2003), as can the use of high-quality and affordable formal in-home services such as homemaker care and visiting nurse care. However, comparisons of household structure patterns across gender, age, and race and ethnic groups suggest that these experiences are not universally shared.

**Gender Differences in Household Structure** As shown in Table 1, older women are considerably more likely to live alone than are older men (36% versus 17%), whereas older men are far more likely to live with a spouse only (57% versus 32%). These patterns largely reflect longer survivorship on the part of women—that is, the greater probability for men that a spouse is available with whom to live—but support the conclusion that both men and women typically live in independent residential situations in later life. Men and women are similarly distributed across most other living arrangements, although women are considerably more likely to live in someone else's household or to live in group quarters. This higher propensity is partly reflective of greater needs for assistance on the part of older women. Older single women also typically have far fewer economic resources than do their male counterparts; indeed, widowhood can trigger a substantial drop in income even for those women who had been part of an economically secure marital unit (Holden, Burkhauser, and Feaster, 1988).

**Age Differences in Household Structure** Table 1 also shows that even among the oldest seniors, residential independence is typical. While 73% of individuals aged 65 to 79 live alone or with a spouse only, even among those aged 80 and over, more than half—64%—live independently. Individuals who are 80 and over are somewhat more likely than their younger counterparts to live in a child's household, and are less likely to head a multigenerational household. Although the oldest individuals are considerably more likely to live in group quarters than are those under age 80, even among these oldest seniors fewer than one out of six lives in a group quarters residence such as a nursing home.

| Living arrangements | Total | Gender | | Age Group | | Race and Ethnicity[1] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Not Hispanic | | | Hispanic |
| | | Men | Women | Age 65–79 | Age 80+ | White alone | Black alone | Asian alone | All races |
| Living alone[2] | 28% | 17% | 36% | 25% | 36% | 29% | 30% | 13% | 19% |
| Living with spouse only[2] | 42% | 57% | 32% | 48% | 28% | 46% | 20% | 27% | 26% |
| **Head of Household:** | | | | | | | | | |
| Living with adult children, or grandchildren | 13% | 13% | 13% | 14% | 9% | 10% | 26% | 19% | 24% |
| Living with others | 3% | 3% | 2% | 3% | 2% | 3% | 5% | 3% | 4% |
| **Not head of household:** | | | | | | | | | |
| Living with adult children, or grandchildren | 5% | 3% | 7% | 4% | 8% | 4% | 8% | 31% | 18% |
| Living with others | 3% | 3% | 3% | 3% | 3% | 2% | 5% | 5% | 6% |
| Group quarters | 6% | 4% | 7% | 3% | 14% | 6% | 6% | 2% | 3% |

[1]In the 2000 Census, individuals may report more than one race although the vast majority (98%) of the population aged 65 and over reports a single race. Race and Hispanic ethnicity are reported separately in the Census; a person reporting Hispanic ethnicity may also report any race.
[2]A small share of these households (less than one-half of one percent) include children under age 18.

SOURCE: Created by the author from the Public Use Microdata Sample (PUMS) from the 2000 U.S. Census of Population and Housing.

***Table 1.*** *Living arrangements of U.S. population aged 65 and over, by gender, age group, and race/ethnicity, 2000.* CENGAGE LEARNING, GALE.

**Race and Ethnic Differences in Household Structure** In addition to reflecting differences in resources, including financial, social, and health-based resources, comparisons by race and ethnicity reflect preferences for living arrangements that may be culturally or normatively defined. Members of some groups, such as African Americans, enter old age having experienced socially structured inequality that shape the ways in which family resources are conceptualized and drawn upon. Members of other groups, such as Asian Americans and Latinos, frequently have also experienced discrimination and reduced opportunities throughout their life course. In addition, these groups are heavily composed of first- and second-generation immigrants. Immigrants may use their family networks in distinctive ways throughout the life course (Van Hook and Glick, 2007) to facilitate adaptation to a new culture and environment. Moreover, some older immigrants migrate to the United States for the express purpose of helping and participating in the lives of their adult children and grandchildren, goals that foster intergenerational living arrangements.

Statistics reported in Table 1 support the conclusion that family and household structure take different forms in later life for members of different racial and ethnic groups. For example, living alone is experienced by 29% of non-Hispanic White seniors and 30% of non-Hispanic Black seniors, but only 13% of Asians and 19% of Latinos. Living with a spouse only is most common among Whites, both because they are more likely to have a surviving spouse (as compared to Blacks, for instance) and because they are less likely to live in multigenerational family households. Heading a multigenerational household is most common among African Americans (26%) and Latinos (24%), but least common among Whites (10%). Living in someone else's household is most common among Asians (36%). Living in group quarters is not common for any of the groups but is especially unlikely for Asians and Latinos.

Although not shown separately here, one aspect of family and household composition that is important for many seniors is providing care for a grandchild who lives with them. A considerable amount of scholarly literature has addressed the phenomenon of "skipped-generation" households—that is, households that include grandparents and grandchildren, but not the grandchild's parent(s). These types of households most frequently occur when a child's parents are unavailable or unable to care for them because of institutionalization, imprisonment, substance abuse, or death (Burton and Bengtson, 1985). As many as 2 million grandparents care for grandchildren in skipped-generation households (Simmons and Dye, 2003), and many more provide substantial levels of support and care to their grandchildren in three-generation settings. Grandparents most likely to care for a coresident grandchild are under age 65, female, and a member of a racial or ethnic minority group (especially African Americans).

## LIFE COURSE TRANSITIONS AND HOUSEHOLD COMPOSITION

The aging process frequently involves changes in resources, family networks, and other circumstances that may promote a transition in household structure. A decline in

economic resources, or the onset of frailty and emergence of new needs for assistance, may trigger a household adjustment. Some homes can be structurally modified to better align with age-related onset of disability—installing ramps so outside stairs can be avoided, for instance, or remodeling a home so all the living space is on a single floor. Homes that cannot be modified structurally, or disabilities that cannot be accommodated through structural accommodation, need not force a residential move if appropriate personal assistance is secured, in some cases. The modification of household structure—by including a familial caregiver in one's own household, for instance—is one way by which living environments may be modified to accommodate changing abilities in later life.

Adjustments in household structure may also occur based on transitions of others in the network—spouses, children, and grandchildren in particular. One of the most common life course transitions having implications for household structure is the loss of a spouse through death. The older individual whose husband or wife dies often experiences an abrupt transition into living alone. If the surviving widow or widower has the economic and health resources to live alone successfully, this living arrangement may persist for the rest of his or her life. Many older individuals, however, are not prepared to live alone upon the loss of a spouse. Some individuals experience substantial financial strain when a spouse dies and may no longer be able to afford to live alone. Disabled widow(er)s may have been reliant on the deceased spouse for assistance with activities of daily living or instrumental activities of daily living, and may need to identify a substitute source of help. If the new financial, emotional, and assistance-related challenges cannot be met within the household as it is configured following the spouse's death, residential adjustment may need to occur.

Many life course transitions having implications for household structure in later life occur not in the life of the older person, but rather in the lives of close members of his or her family network. Established support networks may be fragmented as close others die, move away, or become frail themselves. Most notably, changes in the resources or life circumstances of adult children are relevant in shaping transitions in household composition of older individuals. Observers note that many adult children continue to live at home with their parents for a prolonged period of time, reflecting both the high cost of establishing an independent household as a young adult and delayed patterns of marriage and family formation (Furstenberg, Kennedy, McLoyd, Rumbaut & Settersten, 2004). As a result, some children may still be living at home as adults move into later life. Others may return home following the breakup of a marriage, when experiencing financial difficulties, or as other challenges to independence occur. The "empty nest" commonly associated with middle age, therefore, extends for some individuals well into later life and may have a recurring quality as adult children come and go. These movements of children and grandchildren in and out of the older household may be experienced as a destabilizing influence; for some families, however, such occurrences give older individuals an important productive role, can provide some financial assistance as resources are shared, and can provide opportunities for reciprocal intergenerational exchange of support.

## IMPACTS ON WELL-BEING

Household structure may shape economic well-being in later life either positively or negatively. Through the pooling of resources and the economies of scale facilitated by a shared residence, older persons may experience a more economically secure lifestyle by living with others than they could achieve on their own. Economic benefits may not necessarily occur, however. As noted previously, many intergenerational households are formed because of economic needs for assistance on the part of the younger generation. Older parents who have the resources to support themselves adequately while living alone may experience economic challenges when sharing a home with other family members, if those household additions do not contribute substantially to the household economy. One example in which this situation may be especially challenging is when grandparents take on responsibility for a grandchild in a skipped-generation household. A grandparent who was getting by economically on his or her own may be unable to cover the many financial costs associated with caring for a dependent child.

Emotional well-being may be affected by household structure as well. Some transitions—for example, transitioning to a one-person household or relinquishing one's own home to move in with a grown child—may be experienced as stressful and require a period of adjustment. Loss of a spouse is widely acknowledged to be a stressful event, often requiring significant role adjustment and potentially leading to short- or long-term depression (Carr et al., 2000); the associated household transition corresponding to the death of a spouse may be a contributing factor in this response.

Household composition may also be related to health outcomes in some cases. For example, researchers determined in a prospective study that older women who live alone are less likely to experience functional decline (Sarwari, Fredman, Langenberg, and Magaziner, 1998). The authors speculate that drawing on the social and emotional resources needed to live alone successfully may promote longevity. Other research has suggested that women who live alone may have greater longevity than those who live with someone other than a spouse

(Davis, Moritz, Newhaus, Barclay, & Gee, 1997). Definitive conclusions regarding health implications of household structure are elusive, given the reciprocal causal pathways linking health outcomes and living arrangement decisions.

## FAMILY AND HOUSEHOLD STRUCTURE IN COMING DECADES

Family and household structures among older adults are likely to be shaped in the future by processes similar to those that have been significant in the past. Demographic influences relating to marriage, childbearing, and other close family relationships will continue to determine the availability of family members who may be sources of support and coresidence opportunities for older individuals, and who, in turn, may require assistance and support from the older individual. Financial and health-related resources will continue to shape evaluations of when it is no longer possible to live independently. Preferences will continue to drive the way that older individuals and their families evaluate options for household structure that will be most appropriate at each stage of life. Because the composition of the older population continues to change, however, the resources, family relationships, and preferences of younger cohorts are different from those characterizing the elderly population of the early 21st century. As one elderly cohort is replaced by another, past patterns of aging are frequently inaccurate predictors of behaviors that may be typical in the future. Changed outlines of family and household structure are likely to result from this process of cohort succession.

Compared to the cohorts of those 65-plus, the middle-aged cohorts of the early 21st century will enter later life having experienced later marriage, more marital disruption, fewer children, and greater acceptance of nonmarital sexual relationships, including cohabitation. While fewer may be living with a spouse as a result of these marital patterns, more may share a household with a cohabiting partner if past living arrangement patterns are carried into later life. More of the older population in coming years will have remained childless, and most will have had smaller families than did their parents. As a result, more may live alone, and fewer will share a household with a child. At the beginning of the 21st century, other relatives, such as siblings, shared households only rarely. However, because many members of the baby boom cohort have more siblings than children, the possibility that conventional forms of household composition may adapt to accommodate changing demographic realities cannot be ruled out.

The resources of the cohorts who will be entering later life in the first few decades of the 21st century are also likely to be distinctive. Estimates suggest that baby boomers, on average, are healthier and better prepared financially for retirement than their parents were (Greenblatt, 2007). Better health and lower levels of disability may result in fewer needs for assistance on the part of incoming cohorts of seniors; if so, residential independence will be more likely for many. Moreover, if they reach later life with better financial security, they may be better able than the older cohorts of the early 21st century to realize their household structure goals. Some evidence suggests, however, that baby boomers are less likely to own a home at midlife than were same-age people a generation earlier. Inasmuch as an owned home is the most significant asset held by most older people, this may reflect a gap in economic security among seniors in the future that could have implications for household structure.

Emerging options for receiving assistance and securing independence may reshape household composition in coming years. It is likely that in the future a wider range of in-home services will be available; if these services are provided at acceptable cost and in a convenient way, then even elders with substantial needs for assistance may be able to live independently. Housing options such as assisted-living and continuing-care communities are likely to be increasingly available. For members of the new cohorts of seniors who prefer independent living arrangements and can afford these options, and especially for those with few familial resources on which to draw, these options are likely to be heavily used and will result in more seniors living in "quasi-independent" households.

An additional factor that will contribute to the reshaping of household and family structure among older people in the future is the growing racial and ethnic diversity of the population. The baby boom includes far more Asians and Latinos than earlier cohorts, and almost one in six boomers is an immigrant, mostly from Latin America or Asia. These diverse populations bring unique life course experiences shaping family composition, the accumulation of resources, and the health and disability trajectories that determine needs for assistance. As well, most of these rapidly growing groups are considered to hold "familistic" values that support intergenerational caregiving and coresidence. Household composition among older Americans in coming years could be modified to include more intergenerational families as a result of these growing ethnic populations. However, to the extent that patterns of higher intergenerational coresidence are primarily a reflection of recent immigration to the United States (Van Hook & Glick, 2007) or of socioeconomic status (Burr & Mutchler, 1993a), household structure differences among race and ethnic groups may not persist assuming high levels of assimilation and acculturation.

**SEE ALSO** Volume 3: *Caregiving; Grandparenthood; Intergenerational Transfers; Parent-Child*

*Relationships, Later Life; Sibling Relationships, Later Life; Singlehood; Social Integration/Isolation, Later Life; Social Support, Later Life; Widowhood.*

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***Jan E. Mutchler***

## FONER, ANNE

***1921–***

Anne Foner illustrates in her own life a key principle she and her colleagues have emphasized in the sociological analysis of aging and society: that the process of aging from birth to death is not immutable but changes as society itself undergoes transformation. She was part of the first wave of adult married women in the United States who returned to school and the workforce when they were in their 30s and 40s, helping to establish a new life course pattern for women in the United States.

Foner received her B.A. in 1941 from Queens College, now part of the City University of New York, as a member of the first graduating class. She did not go on to graduate study until 1960, having spent the intervening years in domestic, volunteer, and part-time work activities. She received a Ph.D. in sociology from New York University in 1969 and went on to teach in the sociology department at Rutgers University. She officially retired in 1991 but continued professional activity well into her 80s.

It was at New York University that she first met Matilda White Riley (b. 1911), with whom she later collaborated on what was Foner's first major published work: a multivolume series on aging and society. The first volume, *Aging and Society I: An Inventory of Research Findings*, was more than a catalog of research on aging. It selected from a voluminous literature and condensed and organized social science findings on people in their middle and later years. It began to suggest broad generalizations about human aging. At the same time, it pointed to limitations in the available studies and called attention to commonly accepted beliefs about aging that did not hold up to careful scrutiny. The third volume, *Aging and Society III: A Sociology of Age Stratification*, coauthored with Riley and Marilyn Johnson, explored the implications of research on aging for understanding age as built into social institutions and affecting individual attitudes and behavior.

In subsequent publications she explored age as an element in social structures and social change and highlighted that it—like sex and race—is a basis of social

***Anne Foner.*** **PHOTO BY PEGGY FONER. COURTESY OF ANNE FONER.**

differentiation and inequality. Like other forms of social stratification, she noted that age-based inequalities in power and privilege are found in all societies, but age systems of inequality are unique. Because aging is inevitable, as people grow up and grow older they confront different opportunities or constraints over the life course—and this can affect how they react to disadvantages or advantages experienced at any given time.

Age-based inequalities, Foner observed, are also the basis of age conflicts. The young may perceive themselves as relatively disadvantaged and may challenge the middle-aged and older adults who seek to protect their privileges. Age conflicts can also stem from differences in worldviews and values arising from the social, political, and economic context of the period in which successive cohorts live out their lives. Generally, age conflicts are played out in institutional spheres such as the family, the workplace, and religious associations, but occasionally they spill out across the whole society—typically over moral issues that do not lend themselves to compromise. Societal-wide age conflicts can lead to change in age systems in the society, a major theme in Foner's work.

According to Foner, change in age systems can affect different elements of these systems. For example, there may be changes in the number of socially recognized age divisions such as the discovery in earlier times of adolescence as a distinct life stage, changes in the relative sizes of different age strata such as the increase in the number of older people and decrease in the proportion of children and adolescents in recent times, or changes in age norms governing attitudes and behavior deemed appropriate for people of given ages. These changes often come about as societies and individuals deal with societal events such as wars and depressions and technological and political transformations.

Sometimes the push for change comes about from coordinated actions of many individuals in organized social movements. At other times the push for change comes about from the uncoordinated actions of many people of a given age reacting to new circumstances in the society. A case in point is the move by many individual married adult women into the paid workforce in the 20th century. In changing their own lives, they also changed societal norms of appropriate behavior for adult women.

Beyond these macro-level issues, Foner focused on individual-level processes, including retirement, intergenerational relationships in the family, transitions over the life course, and age-related political attitudes and behavior. In studying aging from birth to death and recognizing age as a key element in social structure and social change, Foner has helped broaden the understanding of age as a social phenomenon and strengthen its connection to the entire sociological tradition.

**SEE ALSO** Volume 3: *Riley, Matilda White; Theories of Aging.*

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***Nancy Foner***

# FRAILTY AND ROBUSTNESS

Generally speaking, scientists have used the term *frailty* to describe a state of health in which a person is more susceptible to negative health outcomes, such as serious illness or death, than a person termed *robust*. Different scientific disciplines offer competing yet complementary perspectives on frailty, its causes, and its consequences. However, a consequence recognized by all is that such differences across people imply that everyone can expect their own, unique experience of health across their lifetime and particularly in late life. Some people may "age well" and maintain the ability to perform their day-to-day tasks efficiently, leading active and fulfilling lives through advanced ages. Others may be less fortunate, perhaps losing the ability to perform some activities that they would otherwise like or need to do, and less able to endure the daily challenges that those living independently encounter on a regular basis. Examples of such challenges include the physical task of walking up and down stairs or to the corner store, recovery from an illness or fall, or distressing events such as the death of a spouse. Failure to successfully meet these and other related challenges may serve as important markers for elevated risks of subsequent health declines in late life, including serious disease or death.

Robust older adults are more likely than others to successfully meet these challenges and avoid long-term, negative impacts on their health; frail elders are less fortunate and more likely to suffer greater frequency and severity of illness, adverse events, and, potentially, a shorter life span. Several of the studies reviewed here, particularly those in the medical sciences, consider this susceptibility as a relative inability to recover from common stressors, examples of which might include illness, surgery, a fall, negative psychosocial experiences, or traumatic events. A person who is not frail is thought to be relatively robust to the health risks that could accompany such exposures.

Although such notions of frailty and robustness (in related contexts sometimes called *resilience*) could be characterized in other age groups, the discussion in this entry focuses on the concepts of frailty and robustness in late life. However, even among older adults only, the prevalence of frailty might differ widely, depending on the perceptions of elders, their families, and their health care providers. As a result, researchers and health care providers have worked to specify exactly what these terms mean, what they imply for the clinical care of elders, and the clinical and public health opportunities for development of interventions to enhance health in late life. In addition, the concept of frailty has implications for the study of population health: If the most frail die youngest, then one must be careful when interpreting data characterizing the older population because it would naturally reflect the less frail survivors (Vaupel & Yashin, 1985).

The concepts of frailty and robustness can be illustrated using the following two fictitious case histories. Mr. X is a 75-year-old man who volunteers each week teaching children to read, walks his dog with his wife every day, and controls his high blood pressure with exercise, a low-salt diet, and medication. He interacts regularly with a wide circle of friends and neighbors and is considering joining a bridge club at his church. A month ago, Mr. X had surgery to remove a cataract, recovered well, and is now completely back to his prior level of function. In contrast, Mr. Y is a 75-year-old man who used to walk outside regularly, but he now feels uncertain on the sidewalks and largely restricts his movement to inside his house. He says that he rarely has

the energy to socialize with friends and, although he still enjoys tending to his garden, he is worried that he might fall and so keeps only a window-box garden. Mr. Y recently had a small stroke following cataract surgery, which has affected his balance and coordination, and both he and Mrs. Y are concerned about his safety and whether he should continue to live with his wife in their home. Mr. X would be regarded as nonfrail or robust, whereas Mr. Y would be regarded as frail.

Researchers from a variety of scientific disciplines have sought to define frailty and understand the reasons that people vary in their ability to avoid the long-term health risks associated with negative physical or emotional experiences (e.g., the minor surgery in the preceding case histories) and recover to their original level of health. The fact that older adults with similar health vary in their ability to withstand such exposures and either maintain function or falter has led researchers and health care providers to seek an explanation for such differences, and this entry reviews several important studies. Some of this work examines large numbers of older adults to try to improve researchers' ability to predict mortality rates across populations or time, primarily through tailoring statistical methods to account for unseen differences in people, such as frailty, that affects their risk of death. Other studies highlighted here focus on the individual and seek to unravel, at the biological level, the mechanisms that define how resilient a person may be to the numerous negative physical and social incidents that accumulate throughout late life.

Among social scientists, demographers have developed a notion of frailty in their quest to understand differences in mortality across populations or population subgroups. For example, James Vaupel, Kenneth Manton, and Eric Stallard (1979) wanted to improve the way in which demographers calculate mortality rates for a population. Building on prior work, they modified typical calculations for mortality to account for potential differences in the risk of death across people in a population. In particular, they assumed that being frail meant that a person's risk of death was relatively higher than another member of the population who is not frail. Defining frailty in this way is consistent with the core notion outlined previously (i.e., that frailty comprises elevated risk of subsequent poor health but is distinctive in that it is generally not focused on understanding the biological sources and detailed individual mechanisms that produce elevated health risks for individuals). However, some subsequent work has moved in this direction; for example, work by Anatoli Yashin and Ivan Iachine (1997) developed a method to use data on twins to study the relative effect of genes and environment on longevity, and a review that includes twin studies (Christensen, Johnson, & Vaupel, 2006) suggested that life span may, to some degree, be affected by genetic factors.

Many researchers in demography and other social science disciplines have expanded on the preceding work and related ideas. Researchers have also adapted the earlier notion of frailty to study important life-course events that are unrelated to health—these include, for example, childbirth, marriage, or employment. This work uses particular kinds of statistical models that estimate the risk of death or each of these other important life-course events and applies the term *unmeasured* (or unobserved) *heterogeneity* to describe the unspecified individual differences in the probability of such outcomes (Wooldridge 2002, p. 703), which is consistent with the theme underlying earlier use of the term *frailty* in demographic literature.

In the medical sciences, research on frailty is led by gerontologists and geriatricians and can be seen as complementing work in the social sciences by focusing on the identification of specific biological mechanisms and a clinical, diagnosable syndrome that could lead to a range of health outcomes, including death and other clinically significant end points. Several conceptualizations of the geriatric syndrome of frailty have been developed but, although the specifics of each vary somewhat, Howard Bergman et al. (2007) found, "general agreement that the core feature of frailty is increased vulnerability to stressors due to impairments in multiple, inter-related systems" (pp. 731–732). Stressors might include, for example, an episode of illness or distressing events such as the death of a spouse. However, because of the differences in which frailty is theorized to operate, a variety of methods have been proposed to measure frailty. In the following we review several distinct theoretical conceptualizations for the geriatric syndrome of frailty that extend from this core conceptualization of "vulnerability to stressors" and impaired function of multiple biological systems and the empirical measurement approaches that have been suggested to accompany each. Each measurement approach has been associated with a variety of negative health outcomes associated with aging.

Linda Fried et al. (2001) theorized that frailty is a clinically observable syndrome that follows a specific, cyclical pattern. Specifically, they suggested that processes of aging and existing disease can induce loss of muscle mass, followed by declines in strength and endurance, then reduced activity and metabolic function, lower energy use, and, finally, nutritional deficiencies. Closing the cycle, nutritional deficiencies are hypothesized to induce further muscle loss and so on (see p. M147 and Figure 1). Researchers have operationalized this conceptualization in studies by defining as frail a study participant who has at least three of five measured characteristics, including weak grip strength, slow walking speed, exhaustion, low energy expenditure, and weight loss (Bandeen-Roche et al., 2006).

Other researchers have adopted this approach but measured a larger variety of characteristics in defining frail (Puts, Lips, & Deeg, 2005). A contrasting view is provided by Kenneth Rockwood and Arnold Mitnitski (2007), who defined the geriatric syndrome of frailty more broadly as being manifest in the total number of deficits (e.g., diseases, clinical diagnostics, disability measures, and so on) that a person has. That is, they suggested that "The more things individuals have wrong with them, the higher the likelihood that they will be frail" (p. 722). This approach is operationalized by calculating a continuous frailty index equal to the proportion of deficits present. A recent comparison of these two conceptualizations of geriatric frailty and their measurement (Rockwood, Andrew, & Mitnitski, 2007) found that the measures are related (using a variety of statistical tests). However, their discussion points out that the different perspective (i.e., specific cyclical pattern vs. global assessment of deficits) and empirical operationalizations (i.e., a discrete count variable from 1 to 5 vs. a continuous index between zero and 1) mean that each approach has strengths and weaknesses for the study of biological mechanisms and clinical translation of frailty.

Frailty is a concept that is potentially important to a variety of events in later life. First, as suggested by the literature reviewed previously, it is a risk factor for a range of significant health outcomes in late life, which in turn play an important role in decisions that govern numerous events in the later life course. For example, frailty is associated with disability, which could affect decisions about work, the decision of a spouse to provide informal support, the decision by an elder to coreside with children or other family and receive informal support from them, the ability of elders to "age in place" or move to new surroundings, and the degree of social engagement that can be maintained. These are major changes that affect older adults, members of their family, and their social networks. In addition, because they can be associated with health, these changes also affect every taxpayer, because public programs such as Medicare and Medicaid spend many taxpayer dollars on health care for older adults. Conversely, the life-course perspective can also bring numerous insights and stimulate advances in the study of frailty (Kuh, 2007).

This entry closes by revisiting Mr. X and Mr. Y and reconsidering their experiences of health change, both in light of the preceding discussion of frailty and robustness and to illustrate the wide range of factors that determine health in late life. Mr. X was identified as nonfrail because he has maintained the capacity to actively engage with his environment; by volunteering, walking, and effectively managing his health conditions, he demonstrates the ability to respond successfully to a multitude of physical and cognitive challenges. He seeks out additional interaction and challenges in the form of his social activities. Finally, in the face of an acute stressor (his surgery), he regained his prior level of function with no lasting adverse effects. Conversely, Mr. Y exemplifies a frail older adult. He has reduced his level of activity because of his perceived inability to navigate safely outside and his lack of energy. In addition, the surgery experience was followed by a stroke, which (although not necessarily causally related) left him with a markedly reduced level of physical function. At present, frailty research offers the physician and family of each man an integrated perspective on their respective experiences and proposes a rationale for why each man achieved, or suffered, his respective outcome. In the future, as research on frailty progresses, perhaps one day a frailty diagnosis may offer physicians, their patients, and their families an opportunity for treatment. Ultimately, the objective of research on frailty and robustness is to design interventions to increase robustness and prevent frailty.

**SEE ALSO** Volume 3: *Aging; Allostatic Load; Centenarians; Disability and Functional Limitation, Later Life; Genetic Influences, Later Life; Mortality; Oldest Old.*

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# FRIENDSHIP, LATER LIFE

Friendships contribute to health and well-being throughout the life course, including later adulthood. Older adults with close friendships have been found to be healthier, happier, and more socially active than those without close friendships (Rawlins, 2004).

## AGE SIMILARITIES AND DIFFERENCES IN FRIENDSHIP

Friendships in later life are similar to friendships in earlier life stages in some ways. For example, later life friendships continue to provide someone to spend time with, talk to, help with practical tasks, and provide emotional support and companionship. Throughout life, then, friends are people with whom individual share mutual trust and respect, interests and values, and affection and support (Blieszner & Roberto, 2004).

Later life friendships also differ in some ways from earlier friendships. Friendships in childhood, limited by children's cognitive abilities, tend to be rather self-serving, focusing primarily on companionship and enjoyment (Blieszner & Roberto, 2004). Maturing cognitive processes in adolescence increase the importance of mutuality and reciprocity in relationships, and friends come to be seen not only as companions, but as intimate confidants (Berndt, 1996). In young adulthood, friendship networks expand, as new lives and social ties are forged away from home. In later adulthood, in contrast, new friendships are less likely to be formed, although some older adults do attempt to form new ties and many are successful, especially following the death of a spouse (Lamme, Dykstra, & Broese van Groenou, 1996).

In general, social networks tend to shrink rather than expand in later life. Yet this generally does not increase older adults' susceptibility to loneliness because the number of close friends changes little over time; declines in social networks, instead, result from reduced contact with peripheral social ties (Carstensen, Fung, & Charles, 2003). Thus, with increasing age, the number of friends in people's social networks tends to decline, but the remaining friendships tend to be deeper and more fulfilling.

## QUALITATIVE ASPECTS OF FRIENDSHIPS IN LATER LIFE

Qualitative aspects of friendships often influence whether a friendship will withstand the test of time. As people age, friendships based primarily on shared interests may diminish as a result of declining health or transportation difficulties. In contrast, close friendships based on a long history of shared experiences and intimate exchanges are more likely to endure. These long-term friendships provide older adults with a sense of continuity in their lives and, as a result, are highly valued. In fact, older adults' close friendships are less likely to end as a result of increasing distance or decreasing contact, whereas these factors often lead to the dissolution of friendships in younger age groups (Nussbaum, 1994).

Evidence that the quality, rather than the quantity, of social ties is particularly important also can be found in studies that have examined the contributions of contact with friends versus family members toward older adults' well-being. For many older adults, life satisfaction appears to be more strongly related to contacts with friends than with family (Lawton, Winter, Kleban, & Ruckdeschel, 1999). Friendships are voluntary in nature, making interactions with friends enjoyable (Rawlins, 2004). Family relationships, in contrast, are more obligatory in nature, and interactions with family members may be enjoyable at times but routinized or perfunctory at other times. In fact, a study of older adults' daily activities and well-being found that their interactions with friends frequently involved stimulating leisure activities, whereas their interactions with family members frequently involved maintenance tasks (e.g., housework) or passive forms of leisure (e.g., watching television; Larson, Mannell, & Zuzanek, l986). Not surprisingly, interactions with friends are more strongly related to well-being (Pruchno & Rosenbaum, 2003).

However, family members are most often called on when older adults fall ill to provide sustained aid and care that might strain a friendship (Rawlins, 2004). Friends and family members, therefore, can be regarded as making

***Old Friends.*** *For five decades, this group of eight women has gathered once a month to play cards, enjoy good food, and savor lasting friendships. In January 2006, they celebrated their golden anniversary in Salt Lake City at the same place where they played their first hand of canasta in November 1955.* AP IMAGES.

complementary contributions to older adults' health and well-being by serving as sources of companionship and care (Rook & Ituarte, 1999).

## DEMOGRAPHIC CHARACTERISTICS AND INDIVIDUAL DIFFERENCES THAT INFLUENCE FRIENDSHIPS IN LATER LIFE

Demographic and individual differences influence later life friendships. As is true throughout life, women's friendships are characterized by more intimate self-disclosure, whereas men's friendships typically involve shared activities (Beals & Rook, 2006). As a result, women tend to have closer same-sex friendships than men, and this is particularly true for married people. Most married women have close confidants beyond their spouses, but men typically do not (Phillipson, 1997). Social class also continues to play a role in later life friendships, with middle-class people having more friends than working class older adults (Phillipson, 1997), most likely due to their greater financial resources. Personality factors also affect friendship formation and maintenance in later life. Not surprisingly, extroverts and those who are more open to experience have been found to have larger social networks than introverts and those less open to experience, even among the oldest old (80 years and older; Lang, Staudinger, & Carstensen, 1998).

Other factors (e.g., poor health and mobility, financial problems, residential relocation, transportation difficulties) can impede the formation or maintenance of later life friendships. Although these problems can contribute to or exacerbate relationship tensions (August, Rook, & Newsom, 2007), many older adults report great satisfaction with their social relationships despite these obstacles (Carstensen et al., 2003).

## THEORETICAL PERSPECTIVES ON AGE AND FRIENDSHIP INVOLVEMENT

A strikingly robust finding in social gerontology is an age-related reduction in social network involvement. According to Disengagement Theory (Cumming & Henry, 1961), this decline is a natural aspect of aging that allows older adults to turn inward and reflect on their lives as they prepare for the approaching end of life. According to Activity Theory (Maddox, 1963), in contrast, this decline reflects societal rejection of the elderly, driven by ageist attitudes. The key to successful aging according to this theory is to maintain social activity, replacing lost social roles (e.g., worker) with new ones (e.g., volunteer) if necessary. Neither of these theories, however, fully captures the complex relationship between social involvement and well-being in later life. Whereas some older adults strive for extensive social involvement, many are content with a reduced level of social activity.

Socioemotional Selectivity Theory (Carstensen et al., 2003) contends that the age-related decline in social network involvement is due to people's growing awareness as they age that time left to live is limited, creating a preference to spend one's time with the most meaningful, emotionally rewarding interaction partners. Thus, the reduction in network size reflects the shedding of superficial relationships while the closest and most important relationships remain intact.

Another theoretical perspective on friendships, Social Exchange Theory (Thibaut & Kelley, 1959), posits that healthy friendships are those that have an equitable "give and take," and this remains true in later life. Reciprocity, being able to give back an amount of support equivalent to what was received, may be even more important to relationship satisfaction in friendships than in family relationships (Rook, 1987). However, declines that accompany aging, such as diminishing health or resources, may keep older people from seeking support from friends if they feel unable to reciprocate (Rawlins, 2004).

## CURRENT TRENDS AND FUTURE DIRECTIONS

Losses are increasingly common as one ages, and friendship loss is no exception. In one study of adults over age 65, 25% reported the death of a friend in the preceding year (Aldwin, 1990). Another study found that for those older than age 85, the numbers increase to 59% for men and 42% for women (Johnson & Troll, 1992). But despite the high rates of loss, friendships in later life likely will increase in importance in the future because demographic trends suggest that more older adults will be single, childless, and/or living far from relatives. Friendships are a particularly important source of support and companionship for single people and are especially important when family members are not available (Cantor, 1979; Lang et al., 1998). In one study, neighbors and friends of frail elders assisted with instrumental support tasks such as providing transportation and helping with daily tasks (Barker, 2002). Highly personal forms of care for incapacitated elders, such as bathing or feeding, are, however, typically performed by family members or formal caregivers. More research is needed to determine whether friends can comfortably and effectively perform such support tasks over time (Rook, Sorkin, & Zettel, 2002).

More research examining the diverse forms and functions of friendship in later life is also needed. For example, future research should investigate the patterns of friendships throughout life for sexual minorities (i.e., gay, lesbian, bisexual, and transgendered people; Galupo, 2007) as well as for various ethnic minority groups. Researchers also should investigate the role that intergenerational friendships can play in the social networks of older adults. Although same-age friends are most typical throughout the lifespan, having some friends who are younger may be beneficial for older adults given the increased probability of illness or death among friends who are closer in age. Moreover, as greater numbers of older adults become comfortable accessing the Internet, alternative modes of communication (e.g., e-mail, online chat rooms) may enhance later life friendships when relocation or limited mobility hinder in-person interactions. Finally, some intervention studies have shown promise in terms of helping lonely older adults form friendships (e.g., Stevens, Martina, & Westerhof, 2006); researchers should continue to pursue interventions that have the potential to enhance friendships in later life.

**SEE ALSO** Volume 3: *Social Integration/Isolation, Later Life; Social Support, Later Life; Theories of Aging.*

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## FUNCTIONAL LIMITATIONS

SEE Volume 3: *Disability and Functional Limitation, Later Life.*

# G

## GAMBLING, LATER LIFE

SEE Volume 2: *Gambling.*

## GAYS AND LESBIANS, LATER LIFE

The study of lesbian, gay, bisexual, and transgender (LGBT) older persons has much to contribute to the understanding of aging in minority communities and under stigmatized conditions. As such, it has much to offer an analysis of aging more generally (de Vries and Blando, 2004), fostering a more holistic and inclusive view of the diverse experiences of older persons and the life course.

### PARAMETERS OF THE POPULATION

In some contexts and situations, the term *LGBT* has been expanded to include: Q, for *queer*, and another *Q* for *questioning*; *I* for *intersex*; another *T* for *two-spirit*. As de Vries (2007) has pointed out, these additions are motivated by a variety of social forces including age and cohort, an increased attention to process, advances in theory and the body of knowledge, and an explicit recognition of the role of culture, as respectively revealed below. For instance, *queer* is a term more commonly endorsed by younger rather than older gay men and lesbians, perhaps in the service of empowerment and neutralizing and/or claiming a pejorative label (Adelman, Gurevitch, de Vries & Blando, 2006). *Questioning* reflects a more fluid appreciation of sexual experiences. *Intersex* derives from the reframing and deeper understanding of those born with genitalia that are neither exclusively male nor female. *Two-spirit* is a term rooted in Native American and Canadian first nations cultures characterizing the presence of both a masculine and feminine spirit within the same body.

Among older adults, the majority of research has focused on gay men and, to a somewhat lesser extent, lesbians. Much is missed by this relatively restricted focus. Miller, Andre, Ebin, and Bessonova (2007) remind readers that bisexuals are not identified by the gender of their partner(s); that is, a bisexual woman whose partner is a woman remains a bisexual rather than lesbian; a bisexual woman whose partner is a man remains a bisexual rather than a heterosexual. Such invisibility dramatically adds to the challenges of the bisexual experience. Intersex persons of the later years have also been neglected in research and analyses; similarly, transgendered persons are rightly critical of the largely superficial and often dismissing ways in which their experiences have been incorporated. As is true to varying degrees for those who identify as lesbian, gay, bisexual, or intersex, a great diversity is meant to be contained within the single *T* category. For example, transgender persons include heterosexual, homosexual, and bisexual persons. They include persons who present as male and/or female in varying situations. They include persons who may be postoperative, preoperative (e.g., transitioning), or nonoperative male-to-female (MTF) or female-to-male (FTM) (Cook-Daniels, 2006).

Within the above constraints and considerations, estimates of the prevalence of LGBT persons in general, and older LGBT persons in particular, vary widely: The

legacy of stigma (and hence the reticence to identify as LGBT) and the malleability of sexuality and identity render the validity of such estimates questionable. Cahill, South, and Spade (2000) suggest that the current LGBT population in the United States over the age of 65 may be as large as 3 million people—perhaps expanding to as many as 4 million by the year 2030. These estimates are likely under-representative of this population—a statement of increasing significance with the aging of subsequent cohorts who are known for their questioning of authority and pushing of boundaries.

## STUDYING THE LGBT POPULATION

Perspectives on sexuality and the elderly have been framed by myths declaring older persons are sexually unattractive, neither desirous nor capable of sexual expression. In contrast, the very notion of an LGBT gerontology raises the issue of sexuality directly (de Vries and Blando, 2004). The literature on LGBT aging and older persons has developed in both size and complexity since the early 1980s. Early publications were largely anecdotal and/or clinical, descriptive accounts often depicting older homosexual men and women as socially isolated, depressed, sexually frustrated, unhappy, among a host of other such characteristics (Berger, 1996). As the field grew, the publications became increasingly empirical in nature, although typically still based on small samples of openly disclosing women and men recruited from public and urban centers who were willing to participate in research. Still, the extent to which there can be a representative sample of men and women manifesting characteristics (or representing a variety of terms and constructs) that are stigmatized and in flux remains problematic.

The literature on gay and lesbian older adults frequently comments on the marked cohort effects in communities of LGBT persons and how their lives have been shaped by historical period. The LGBT cohort now in later life are individuals whose expressions of love were "diagnosed" as a psychiatric disorder in the *Diagnostic and Statistical Manual* (the psychiatric diagnosis "bible") until it was changed in 1973. Even in the early 21st century, their committed relationships are the subject of intense debate with threats of constitutional exclusion in the United States. These are individuals who, through the course of their lives, have been labeled as anti-family and immoral by religious groups, and as a security risk or morale threat by military leaders (Kochman, 1997). These are women and men who endured and have seen AIDS decimate their social networks and destroy their communities.

A common and significant reference point defining this cohort is the Stonewall Rebellion or Riot. On the evening of June 27, 1969, a contingent from the New York City Police Department (NYPD) raided the Stonewall Inn, a gay dance bar in Greenwich Village, New York City. These raids were part of a routine pattern of harassment endured by the occupants of this and most other gay and lesbian bars. On this evening, however, the police raid escalated into several nights of street fights and clashes between outraged gay men and a NYPD that was not accustomed to homosexuals fighting back. The events of these evenings were widely reported in and sensationalized by the media; it became known as the Stonewall Rebellion and what many identify as the turning point in the struggle for gay rights in the United States.

## THEMES AND PROMINENT ISSUES IN THE STUDY OF LGBT AGING

The developing research into the lives of older LGBT persons suggests a population both challenged and bolstered by its demography and experiences. de Vries (2006) reported that LGBT older adults are significantly less likely than heterosexual women and men of comparable age to be in partnered relationships and to have children, two of the groups most frequently called upon in the provision of care for an elder in need. For example, a large community survey, including more than 700 participants at least 50 years of age, found that about three-quarters of gay men and about one-half of the lesbians reported their relationship status as single and only one-quarter of gay men and one-half of lesbians had children (Adelman et al., 2006), the majority of whom were born into the previous heterosexual marriages of these individuals. A national survey of LGBT baby boomers found that many reported concerns about where and how their future care might be addressed (MetLife Survey, 2007). At the same time, the literature reveals significant discussions of "chosen families," the strong bonds forged by the inner circle of friends and those on whom an individual might call in a time of need, often in response to alienation from biological kin (Weston, 1991).

Interestingly, income levels appear similar across LGBT and heterosexual aging populations, despite persistent myths of relative LGBT affluence (Badget, 1998). LGBT adults tend to be more highly educated (also supported by census-level data, see Black, Gates, Sanders, and Taylor, 2000), providing a point of contrast to the frequently noted association between income and education. Relatedly, several authors have proposed that LGBT older adults have fashioned a sense of hardiness/competence out of a lifetime of surviving as a sexual minority in an often-hostile heterosexual environment—a strategy of engaging their environment that may bode well for success in the challenges of later life. For example, Friend

***Gay Pride.*** *A man is helped by a transsexual as he marches in the streets of Paris carrying a placard reading "Gay pensioners don't want to retire" during the gay and lesbian parade themed "March of proud gays, lesbians, and transsexuals."* PIERRE ANDRIEU/AFP/GETTY IMAGES.

(1991) has offered a theory of successful aging as applied to older lesbians and gay men, primarily based on such "crisis competence" (Kimmel, 1979) and confronting rigid gender roles and ageist assumptions. Friend suggests that being freed (or excluded) from the relative bounds of traditional gender role definitions have afforded gay men and lesbians the opportunity to engage in behaviors throughout their lives that heterosexuals rarely confront, perhaps until the death of a spouse. A popular example of this may be found in Harvey Fierstein's *Torch Song Trilogy* (1983) in which Arnold, the main character, a gay man in his early middle years, says that he can cook a meal, sew a shirt, hammer a nail—whatever it takes to get through—he can do it himself as has been required of him throughout his life.

There is some suggestion that later life may bring with it some unique physical and mental health issues for this population. Although not unique to LGBT communities, several authors have commented that ageism is particularly

strong within gay male communities (e.g., Bergling, 2004). Palmore (1990) proposes that persons subjected to prejudice and discrimination tend to adopt the dominant group's negative image and to behave in ways that conform to that negative image with associated potentially deleterious consequences on mental health and well-being. Herdt and Kertzner (2006) reported evidence of higher levels of depression and psychological distress among midlife and older lesbians and gay men, which they attribute to the accumulation of a lifetime of stigma. Adelman and colleagues (2006), in their large community-based empirical study, found higher rates of chronic disease and disability, not the least of which was HIV/AIDS, among older gay men. Rather than a difference in the constellation of disorders, Barker (2004) notes that older lesbian and bisexual women may suffer an exacerbation of prevalence, earlier onset, and manifestation of common disorders. Health issues for transgender persons are similarly made more complicated by the interaction of the aging body with the introduction of hormones for those who have transitioned from one biological gender to another.

## FUTURE DIRECTIONS

In the early 21st century, the first cohort of openly lesbian, gay, bisexual and transgender persons is approaching the later years, creating their own way with little historical reference to serve as a guide. Dozens of efforts are afoot by LGBT communities to provide and care for the aging pioneers of a population. There are parallels in these efforts to the dramatic and inspiring ways in which the LGBT communities (comprising many of these same, now older adults) rose to the challenge of caring for those dying of AIDS in the early years of the pandemic—a time when families, medical facilities, and governments shamefully retreated from their responsibilities.

As de Vries (2007) has noted, it is the interaction of these historical, demographic, and bio-psycho-social factors that make more complex the issues faced by older LGBT persons and the delivery of services that meet their needs. The discriminatory experiences LGBT adults have experienced in North American health care settings (e.g., Brotman, Ryan, and Cormier, 2003) have led to an unfortunate and understandable reluctance to seek out health care services and to evaluate the delivery of such services negatively. When gay and lesbian support and services are available, still rare and certainly an urban phenomenon, they tend to be more frequently used in comparison with the use of generic, heteronormative senior services (see Quam and Whtiford, 1992) and are evaluated more positively. Moreover, the norms and presumptions of heterosexuality and the "family-centrism" that pervade societal institutions often serve to exclude (or at least not invite) the LGBT elder. For example, non-registered domestic partners have been denied entry to the hospital room in which their loved one was dying. Sadly, older LGBT persons who have struggled to come out and live openly in a frequently hostile environment "often find themselves having to [go] back into hiding when they begin to require health care services" (Brotman, et al, 2003, p. 193). The families that LGBT persons create, either in lieu of or in addition to their biological families, are often not recognized and honored by those outside of these intimate circles (de Vries and Hoctel, 2007).

In some ways, the study of LGBT aging and concerns about the services needed and delivered do not differ from that of other groups bounded by culture or relationship status or some other social construct. Studying the particular context within which members of such groups age, their experiences and the source and type of care they receive and need is a necessary prerequisite to the development and offering of services appropriately tailored and to a full and complete appreciation of the life course.

**SEE ALSO** Volume 3: *Sexual Activity, Later Life; Social Support, Later Life.*

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## GENERATION

**SEE** *Cohort.*

## GENETIC INFLUENCES, LATER LIFE

Genetic influences are the influences that can be attributed to heredity (family likeness). Heredity is the passing of characteristics (traits) from parents to offspring. Genetic influences in later life are attributed to traits related to aging such as life span and longevity, age at menopause, age at onset of specific diseases in late life (Alzheimer's disease, heart disease, and so on), physical health and cognitive functioning in later life, rate of aging (estimated through tests for biological age), rate-of-change traits, and biomarkers of aging (Finch, 2007).

Genetic influences are also related to effects of the fundamental chemical units of heredity called genes. A gene is a segment of deoxyribonucleic acid (DNA) carrying coded hereditary information. The number of gerontogenes (genes involved in the aging process) remains to be established, but there are no doubts of their existence. For example, in humans one of the forms of a gene coding apolipoprotein E (APOE2) is associated with exceptional longevity (more prevalent among centenarians) and decreased susceptibility to Alzheimer's disease (Finch, 2007; Martin, Bergman, & Barzilai, 2007).

Genetic influences operate through the mechanism of gene action—the way in which genes produce their effect on an organism by influencing biochemical processes during development and aging. Many of the genes within a given cell are inactive much or even all the time (repressed). Different genes can be switched on or off depending on cell specialization (differentiation)—a phenomenon called differential gene expression. Gene expression may change over time within a given cell during development and aging. Changes in differential gene expression are vitally important for cell differentiation during early child development, but they may persist further in later life and become the driving force of the aging process.

Although genes determine the features an organism may develop (genotype), the features that actually develop (phenotype) depend upon the complex interaction between genes and their environment, called gene–environment interaction. Gene–environment interactions are important because genes produce their effects in an indirect way (through proteins), and, therefore, the ultimate outcome of gene action may be different in different circumstances (Ryff & Singer, 2005). Although genes do not change over the life course (creating the impression of causal links), many traits in later life demonstrate very high environmental plasticity; that is, they can be modified in response to an environmental change (Ryff & Singer, 2005). Older adults on average experience poorer health compared to younger adults, so genetic contribution to health, functional status, and cognition are among the most thoroughly studied traits in later life.

### STUDY METHODS AND DESIGNS

Most studies of genetic influences use quantitative genetics (or ACE) models to separate the sources of phenotypic or observed variability into an *additive* genetic

component (A), a *common* or shared environment component (C), and a nonshared *environment* element (E). Shared environmental influences are shared nongenetic factors that are transmitted from parents to offspring or are shared by the members of the same family (such as lifestyle or diet). Nonshared environmental influences are nongenetic factors that are different among family members. The genetic contribution to phenotypic variability of trait is measured using heritability estimates. Heritability estimates represent the proportion of phenotypic variation of trait that can be explained by genetic effects. A heritability value of 1.0 (or 100%) means that the trait is fully genetically determined, whereas a value of 0 means that the trait is fully environmentally determined.

Quantitative genetics uses a number of designs in the study of genetic influences, including family design, twin design, and the adoption method. Family design compares the incidence of disease (or other trait) among biological and nonbiological relatives of an affected individual (called proband). The famous statistician Karl Pearson (1857–1936) and Alexander Graham Bell (1847–1922), the inventor of the telephone, were among the first researchers to try to estimate the contribution of genetic factors into the human life span at the beginning of the 20th century (see review in Gavrilov, Gavrilova, Olshansky, & Carnes, 2002). The first comprehensive studies of familial resemblance and longevity go back to the 1930s when the American biostatistician Raymond Pearl published his seminal book, *The Ancestry of the Long-Lived*, which showed that close relatives of nonagenarians (persons in their 90s) live longer than relatives of shorter lived persons (Pearl & Pearl, 1934). This initial finding was later replicated by numerous studies of persons with exceptional longevity, including early 21st century studies of centenarians (Martin et al., 2007).

The twin design is based on the comparison of identical (monozygotic) twins and fraternal (dizygotic) twins. Monozygotic twins are assumed to be genetically identical to each other because they developed from the same fertilized egg. Dizygotic twins are formed from two different fertilized eggs and have only half of their genes in common. If a trait is genetically influenced, then monozygotic twins should show a closer resemblance to each other in regard to that trait compared to dizygotic twins. Franz J. Kallmann was the first researcher to apply twin design to the study of late-life traits and to conduct a survey of old twin pairs (Kallmann & Sander, 1948).

The adoption method is a quasi-experimental design based on cases in which children are adopted away from their biological parents early in life. This gives researchers the opportunity to separate the effects of nature and nurture. The Swedish Adoption/Twin Study of Aging is probably the largest repository of data on adopted twins (Pedersen & Svedberg, 2000).

In addition to the methods of quantitative genetics, molecular genetic methods are used to identify specific genes responsible for genetic influence. In molecular genetic studies of human aging traits, the gene association studies remain the most common research approach (De Benedictis et al., 2001). In these studies the effect of candidate genes on longevity is analyzed by comparing gene frequencies between affected individuals (cases) and unaffected control individuals. The comparison of candidate gene frequencies among centenarians and younger controls is a typical example of such studies. Another molecular genetics approach—the genome-wide linkage scan of genes—is a relatively new direction of research. Linkage analysis is a mapping of genetic loci using observations of related individuals (pairs of affected and nonaffected siblings, for example). This direction of research has a potential for obtaining interesting results, although the success of genome-wide scans of complex human diseases requires large sample sizes and considerable effort and expense.

In addition to common phenotypic traits (such as the presence or absence of disease), the genetic epidemiology of aging incorporates age in the specification of traits under study. The traits that are specific for later life are survival traits and rate-of-change traits (Hadley et al., 2000). A survival trait is defined in terms of the specific age interval over which an individual is at risk for a specific outcome. For example, early-onset and late-onset variants of Alzheimer's disease are associated with different genes and modes of action. Rate-of-change traits are defined as changes in physiological, cognitive, or behavioral traits over a period of time. The study of genetic influences on rate-of-change traits is a rapidly developing area of research in the early 21st century (Pedersen & Svedberg, 2000).

## MAJOR RESEARCH FINDINGS

Longevity is one of the most widely studied broad survival traits. It was shown that siblings and parents of persons with exceptional longevity have significantly lower mortality compared to population-based controls and that the offspring of long-lived parents live longer than the offspring of short-lived parents (Gavrilov, Gavrilova, Olshansky, & Carnes, 2002; Martin et al., 2007). Genetic influences on longevity found in family studies were confirmed in twin and adoption studies (see Gavrilov et al., 2002). Although a strong familial clustering of longevity is now a well-established fact, heritability estimates for life span using standard methods of quantitative genetics are moderate—20% to 30% (Cournil & Kirkwood, 2001).

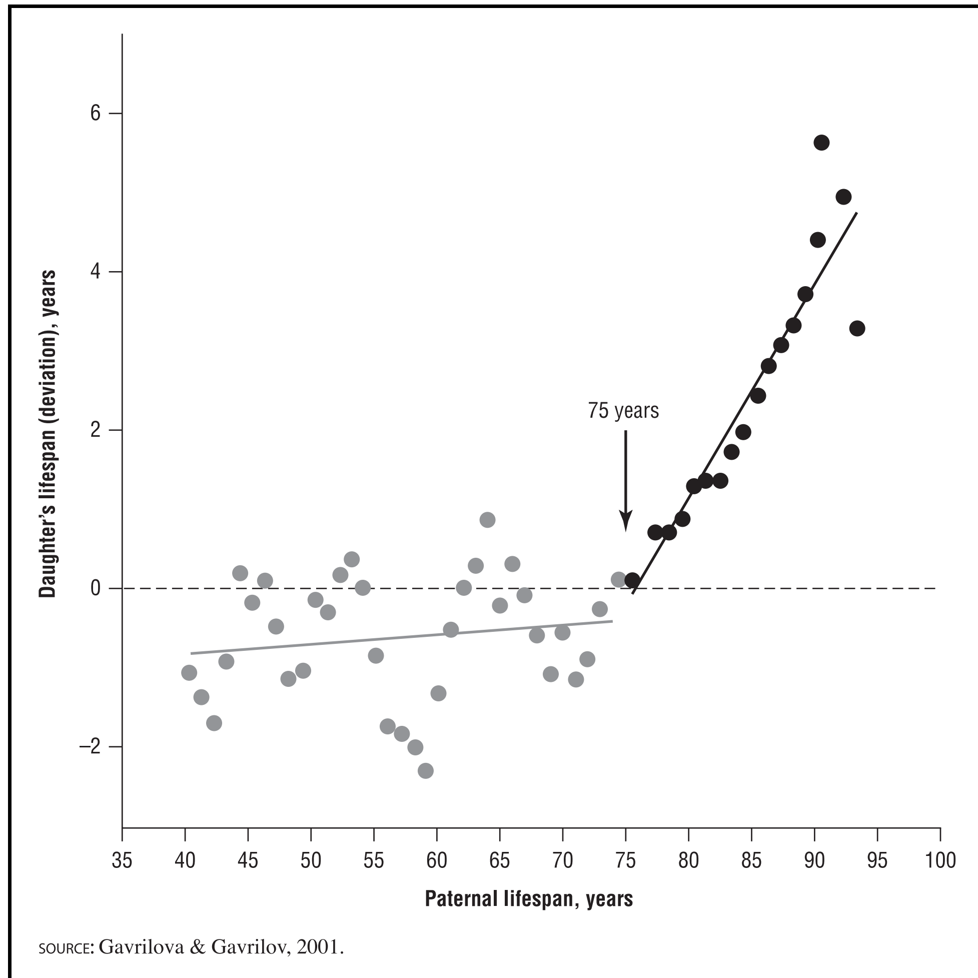


***Figure 1.*** *Daughter's life span (deviation from the cohort mean) as a function of paternal life span. Based on the data for 5,779 daughters from European aristocratic families born between 1800 and 1880 who survived to age 30. Data are smoothed by a 5–year moving average.* CENGAGE LEARNING, GALE.

Heritability estimation by standard methods of quantitative genetics is based on the assumption of linear dependence between offspring and parental traits. A study of more than 10,000 adult men and women from the European aristocracy, however, demonstrated that familial resemblance in life span between parents and children is essentially nonlinear (see Figure 1): very small when parents live shorter lives (30 to 70 years) and very strong in the case of longer lived parents (80+ years), suggesting an unusual nonlinear pattern of life-span inheritance (Gavrilov et al., 2002). These findings may explain the existing longevity paradox: Although the heritability estimates for life span were reported to be rather low (Cournil & Kirkwood, 2001), it is well known that longevity runs in families (Martin et al., 2007). A 2006 study of Danish and Finnish twin cohorts confirmed that genetic influences on human life span are minimal before age 60 but increase thereafter (Hjelmborg et al., 2006).

A review of gene–longevity association studies revealed that different studies often produced inconsistent and even contradictory results (De Benedictis et al., 2001). Most studies of gene–longevity association are based on case-control studies of centenarians, in which the proportion of a certain genotype among long-lived individuals is compared to the same proportion in a presumably shorter lived control group (usually persons of middle age). If the proportion of a particular genotype is higher among long-lived individuals compared to the control group, then it is assumed that this genotype may be associated with longevity. The association of a genotype with longevity in case-control studies is usually measured using odds ratio, which is a measure comparing whether the probability of longevity is the same between two groups. An odds ratio higher than unity means that carriers of a particular genotype have a higher chance of living to 100 compared to non-carriers; alternatively, an odds ratio less

than unity means that carriers of a particular genotype have a smaller chance of living to 100 compared to non-carriers.

The APOE gene is the only one that demonstrated consistency in different case-control gene–longevity studies (Finch, 2007). Apolipoprotein E (APOE) is a protein involved in cholesterol transport that binds to LDL receptors and is crucial to blood cholesterol levels (Finch, 2007). The APOE4 gene variant (allele) was found to be associated with heart disease, Alzheimer's disease, and longevity. APOE3 is the most prevalent allele in human populations, whereas APOE4 may vary and is higher than 15% in northern Europe and among aboriginal populations of New Guinea and Australia (Finch, 2007).

A combined analysis of eight APOE findings showed a net odds ratio for extreme longevity of 0.51 for the E3/E4 genotype compared to the common E3/E3 genotype, implying that the E3/E4 genotype reduces by roughly 50% the chances of survival to extreme ages compared to E3/E3 (Melzer, Hurst, & Frayling, 2007). The prevalence of APOE4 decreases with age because of differential survival—the mortality of E4 carriers is 10% to 14% higher and the mortality of E2 carriers 4% to 12% lower compared to E3/E3 and E4/E2 genotypes. It was estimated that individuals with the E4/E4 genotype may have a life expectancy at age 65 that is 5 years shorter than that of individuals with the E2/E2 and E2/E3 genotypes (Ewbank, 2004). Linkage studies of longevity genes are less common compared to association studies. One genome-wide linkage study of U.S. centenarians found a suggestive locus at chromosome 4, although this finding was not replicated in other populations (Melzer et al., 2007).

Parental age is another genetically linked factor affecting longevity. Children conceived by fathers at older ages have more inborn mutations (Vogel & Motulsky, 1997) and may be at higher risk of Alzheimer's disease and prostate cancer in later life. Daughters conceived by fathers age 45 and older live shorter lives (on average), whereas sons seems to be unaffected, suggesting the possible role of mutations on the paternal X chromosome (inherited by daughters only) in the aging process (Gavrilov et al., 2002).

Most chronic diseases in later life are complex multifactorial disorders. Multifactorial disorders are influenced by multiple genes, often coupled with the effects of environmental factors. Many diseases common to old age, such as late-onset Alzheimer's disease, heart disease, and diabetes, are considered to fall into this category. Most genes associated with multifactorial disorders have low penetrance, meaning that genotype carriers' likelihood of developing the disease is low. Thus, the individuals with disease-related genes do not necessarily succumb to the disease (Ryff & Singer, 2005). With a favorable lifestyle and environment, there is an opportunity for an individual with genetic risk factors to delay and even avoid the disease. For example, in the 1960s and 1970s the population of North Karelia in Finland had very high levels of heart disease and a significant proportion of people carrying mutations predisposing them to familial hypercholesterolemia (high blood cholesterol). However, an intensive community-based intervention program directed at lifestyle improvement significantly percent reduced (by 60% to 70%) heart disease and cancer rates over the span of 25 years (Ryff & Singer, 2005). Thus, the genetic risks of diseases in later life can be substantially reduced by proper behavioral, social, and economic measures.

Alzheimer's disease is the most common cause of severe memory loss at older ages. For late-life forms of dementia, the APOE4 allele was found to be strongly associated with both late-onset Alzheimer's disease and accelerated cognitive decline after age 65 (Finch, 2007). The highest cognitive decline was observed in APOE4 carriers with diabetes, carotid atherosclerosis, and peripheral vascular disease. APOE4 carriers with mild cognitive impairment were two to five times more likely to develop Alzheimer's disease compared to carriers of the most common APOE3 genotype. Another APOE allele, the APOE2, was found to be protective against Alzheimer's disease (Finch, 2007).

Many biomarkers of physiological or functional status including handgrip strength, walk speed, systolic blood pressure, pulmonary function, fasting glucose level, and bone degeneration demonstrate a high heritability at older ages (Melzer et al., 2007). Integral estimates of biological age have also been shown to have a strong genetic component, with heritability estimates ranging from 27% to 57%. Age at natural menopause was found to be highly heritable: Data from the two generations of the Framingham Heart Study showed that the crude and multivariable-adjusted heritability estimates for age at natural menopause were 0.49 and 0.52 (Murabito, Yang, Fox, Wilson, & Cupples, 2005). Sex hormone levels play an important role in health and survival at older ages. Studies of male twins ages 59 to 70 found that plasma testosterone levels have substantial genetic variation, whereas estrogen concentrations were largely influenced by environmental factors.

Cognitive functioning also shows a significant genetic component. Most studies of cognitive abilities in later life were conducted using studies of older twins, which showed that the overall cognitive functioning in older age is highly heritable with estimates of heritability equal to 76% in Danish twins 70 and older and 62% in Swedish twins 80 and older (Melzer et al., 2007).

Researchers have also started to collect information on genetic influences at different ages as well as on rate-of-change traits (Pedersen & Svedberg, 2000). Studies show that phenotypic variability has a tendency to increase with age for the majority of traits because of nonshared environmental effects. Genetic contribution to variability in cognitive abilities shows stability until ages 65 to 70 and declines thereafter. A similar pattern was found for self-rated health. Rate-of-change traits usually demonstrate a lower heritability compared to the absolute levels of studied traits. This was found to be the case for such traits as cognitive performance, body mass index, and lipid and lipoprotein levels. Thus, the rate-of-change traits apparently are not significantly affected by genetic factors.

Gene–environment interactions represent one of the most important and promising areas for the studies of the life course. Gene–environment interactions refer to differential genetic sensitivity to specific environmental factors. Genetic factors often act as effect modifiers (or moderators) when effects of socioeconomic or behavioral factors are analyzed. For example, there is no increase in risk for Alzheimer's disease among persons with head injury if they do not carry the APOE4 gene. For carriers of APOE4, however, head injury results in a tenfold increase in the risk of Alzheimer's disease. Similarly, APOE4 was found to be a risk factor for ischemic heart disease, but this applied mainly to smokers (Ryff & Singer, 2005).

It should be noted that heritability estimates for late-life traits may vary significantly across populations and that populations living in less favorable environments generally demonstrate smaller effects of genetic factors on variability of late-life traits. For example, the heritability of forced respiratory volume in Russian twins was found to be much smaller compared to Swedish twins most likely because of differences in environmental influences between Russian and Swedish samples (Whitfield, Brandon, & Wiggins, 2002).

## RESEARCH CHALLENGES AND FUTURE DIRECTIONS

Studies of genetic influences in later life face many methodological challenges. The main problem is that many individuals do not survive to late ages, and this survival is affected by both environmental and genetic factors. Twin studies often suffer from the limitations of cross-sectional design when it is impossible to distinguish selection effects (genetically determined differential survival) from true aging changes (Pedersen & Svedberg, 2000). Studies on exceptional longevity often suffer from the lack of data on living relatives, including parents (Hadley et al., 2000). Inconsistency in the findings of many gene–longevity association studies may be due to the lack of proper control groups in these case-control studies, because cases (centenarians) and controls (young adults) belong to different birth cohorts with different past histories. Thus, a comparison of centenarians and young adults is susceptible to artifacts resulting from differences in genetic makeup between different age cohorts unrelated to differential survival. The collection of longitudinal data (data from the same individuals over time) for twins and adoptees will alleviate the problems posed by cross-sectional designs and help to discriminate between selection processes and true aging changes. The collection of biomarkers (including genetic markers) that is underway in many population surveys and longitudinal studies in the early 21st century will fill the gap in knowledge about the association between specific genetic markers and later life traits. The most promising areas of research—gene–environment interactions in later life and early life genetic influences on late-life traits—are at the beginning of their development and will shape future life-course research on genetic influences in later life (Pedersen & Svedberg, 2000; Ryff & Singer, 2005).

## POLICY ISSUES

The rapid development of molecular genetics and the prospect of individual genome scans raise serious ethical concerns about the proper use of individual genetic information. Should individuals be informed about genetic risks for chronic diseases in later life if this information may result in unnecessary stress? Older persons having genes predisposing them to the risk of certain diseases (such as the APO4 gene) may be unfairly treated by insurance companies. These problems require both the protecting sensitive genetic information and educating the public that having genes predisposing a person to late-onset diseases is not a destiny and that individuals with unfavorable genotypes may never develop the specific disease (Ryff & Singer, 2005). At the same time, knowledge about genetic markers predisposing to late-life diseases may lead to the development of intervention measures specific to individual genetic makeups. Such a personalized approach may eventually become a fixture in medical care.

**SEE ALSO** Volume 3: *Aging; Dementias; Frailty and Robustness; Life Expectancy.*

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## GLOBAL AGING

Global aging broadly refers to the process by which the populations of the world's nations are growing increasingly older; indicators of population aging include the proportion of a nation's population that is age 65 or older, as well as trend data showing that the average and median ages of a nation's population have increased over time. Population aging processes throughout the world will have critically important social and economic consequences, including a potential shortage of working-age individuals, heightened demand for costly health care services, adequate housing accommodations and pensions for older adults, and a growing number of older adults relying on their children and grandchildren for social and economic support.

The rapid increase in population aging across the globe signals one of the most important demographic changes in recent history. In the latter half of the 20th century, the world's developed nations completed the demographic transition (Phillipson, 1998). The demographic transition refers to a societal-level shift from high mortality rates and high fertility rates (thus, short life spans and large families) to low mortality rates and low fertility rates (thus longer life expectancies, and smaller families). Countries that proceed through this transition ultimately have relatively high proportions of older persons and low proportions of younger persons (Powell, 2005). This transformation has taken many years to unfold, and is influenced by multiple factors. For example, in Europe and North America, the process of population aging is driven by factors including basic public health measures that steadily reduced the risk of contagious disease and modern medicine that has prolonged lives. In developing nations, by contrast, the demographic transition is still underway. These countries vary widely in how far along they are in the demographic transition; although most developing nations have much younger populations than developed nations, their numbers of older adults are increasing rapidly.

Researchers use a variety of methodological tools to document trends in population aging, and to predict the societal consequences of these demographic changes. Data on population aging processes come from multiple sources. Vital statistics registries, maintained by local governments, track all births and deaths as well as changes in an individual's legal status such as marriage, divorce, and migration (registration of one's place of residence) (Phillipson, 1998). In developed countries with good registration systems (such as the United States and much of Europe), registry statistics are the best data source for enumerating the number of births and deaths in populations (Bengtson and Lowenstein, 2004).

Researchers also use data obtained from population censuses. Censuses are usually conducted by national governments and attempt to enumerate every person in a country (Gavrilov & Gavrilova, 1991). Censuses also gather basic social and demographic information about a

nation's population. However, in contrast to vital statistics data that are typically collected continuously and summarized on an annual basis, censuses occur at longer intervals, typically every 10 years. For example, the decennial U. S. Census takes place only once every ten years (Phillipson, 1998). However, the Census Bureau also collects information annually through the American Community Survey. In nations where the vital registration system is incomplete, censuses may be used as an alternative source of information about fertility and mortality. For example, the Chinese census gathers information on births and deaths that occurred in the 18 months immediately preceding the start of the data collection period (Cook & Powell, 2007).

Drawing on these two types of data sources, researchers use a diverse range of measures to study global aging patterns. Demographers typically rely on statistics such as national birth rates (the number of live births for every 100,000 persons in a population), life expectancy projections (average expected length of life at birth), and dependency ratios (the proportion of the population who is of non-working age relative to those who are of working age) to compare and contrast the aging processes of diverse societies.

One important indicator of population aging is the percentage of persons age 65 and older in a population. In the United States, persons ages 65 and older accounted for 13% of the national population in 2000, yet this figure is expected to increase to 20% by 2030 (Estes, 2001). While the proportions of older people in a population are typically highest in developed countries, very steep growth of elderly populations is projected in developing nations (Cook & Powell, 2007). For example, between 2006 and 2030, the number of older people in less developed countries is projected to increase by 140%, compared to an increase of 51% in more developed countries (Krug, 2002).

Population aging not only reflects the proportion of a population that is age 65 and older; demographers also are interested in heterogeneity within the older population. Demographers often count and contrast the "old" (65+) with the "oldest old" (85 and older). The oldest old population is growing at an even more rapid pace than the overall older adult population. Around the world, the 85 and older population is projected to increase 151% between 2005 and 2030, compared to a 104% increase for the overall population age 65 and over, and a 21% increase for the population under age 65 (Bengtson & Lowenstein, 2004). This rapid growth partly reflects the fact that very small numbers of persons were ages 85 and older in prior decades; thus the small number is growing at a proportionally large pace.

The most striking increase will occur in Japan: By 2030 nearly 24% of all older (age 65 and older) Japanese are expected to be at least 85 years old (Kim & Lee, 2007). As will be discussed below, the rise in the oldest old population has important consequences for family relations. For example, the number of four-generation families (that is, families with living children, parents, grandparents and great-grandparents) may become more common as the oldest generation enjoys increasingly long life.

When the proportion of older persons in a population increases, the proportion of younger persons necessarily decreases. This ratio of older persons to younger persons is an important indicator calculated by demographers, as it is often viewed as a potential indication of a society's economic vitality. Demographers often calculate *dependency ratios*, which refer to the number of "dependents" (that is, persons under age 15 and over age 64), relative to those of working age (15 to 64). Interestingly, absolute dependency ratios have changed little over time, but the composition of the dependent population has shifted drastically.

Throughout most of human history, dependent populations had large numbers of young persons (due to high birth rates) and small numbers of older persons, yet in the early 21st century older persons account for a large and growing share of the dependent population. This shift has sweeping implications for policy and culture. For example, a society with a large youthful population would need to invest its national resources in education or job training programs to prepare the young people for the work force. A society with a large older population, by contrast, would need to invest its resources in health care and public pension programs.

## THE SIZE AND GROWTH OF THE WORLD'S OLDER POPULATION

In nearly every nation there is concern about population aging and its consequences for individuals, families, economies, and the state. On one hand, global aging is a triumph of modern times—a desirable consequence of improved public health, sanitation, and social and economic development. On the other hand, long life spans and population that is old often create fiscal strains for societies and families. Although a large proportion of older adults are physically, emotionally, and financially well off, many live with physical disability, cognitive impairment, and financial strain. This disparity creates challenges for governments and families worldwide. These challenges are expected to be most acute for the governments of developing nations because they are experiencing the most rapid growth in the older population.

Population aging can be put into perspective by reviewing a number of statistics that reveal the magnitude of changes that have occurred over the past century. The

United Nations (UN) estimates that the global population of those over 60 years will double, from 542 million in 1995 to around 1.2 billion people by the year 2025 (Krug, 2002, p. 125). Between 2003 and 2004 alone, the world's older adult population grew by 10.3 million persons. Projections suggest that the annual net gain will continue to exceed 10 million over the next decade.

In 1990 only 26 nations worldwide had 2 million or more older persons. By 2000, 31 countries had reached the 2 million older person mark (Cook & Powell, 2007). By 2030 more than 60 countries will have at least 2 million people age 65 or older, according to UN projections. The world is likely to have one billion older people by 2030 (Krug, 2002).

Not only is the total size of the older adult population growing worldwide, but so is the proportion. By 2045, for the first time in history, the global population of persons ages 60 years and over will likely surpass the number of children under age 15 (Powell, 2005). In every region of the world, the rate of population increase for the 65-and-over age group is higher than for the under-14 age group and the 15–64 age group (Bengston & Lowenstein, 2004). As noted earlier, this transformation of the world's dependent population reflects reduced fertility and increased life expectancy. Total fertility rates are expected to decline from 2.82 children per woman worldwide in 1995–2000 to 2.15 children in 2045–2050. Life expectancy worldwide is expected to increase by 11 years, from 65 in 1995–2000 to 76 in 2045–2050—although increases will be more moderate in nations suffering from high rates of HIV/AIDS mortality (Phillipson, 1998).

When absolute numbers are considered, the majority of the world's older adult population lives in developing countries. Even in the world's poorest countries—many of which are plagued by epidemics, AIDS, natural disasters, starvation, and warfare—life expectancy is increasing and the number of older people is growing. By 2015 an estimated two-thirds of the world's elderly population (or roughly 597 million older people) will reside in developing countries (Bengtson & Lowenstein, 2004). In 2005, 1 in 12 people in developing countries were over 60. By 2015, 1 in 10 persons in developing countries will be over 60, and by 2050, 1 in 5 people in developing countries will be over 60.

Throughout most of the globe, older persons are more likely than younger persons to be female. In 2006 there were 82 men for every 100 women over age 60 worldwide (Powell, 2005). In developing countries, the gap is less wide: There are 85 men for every 100 women over 60. However, as age increases, the sex ratio grows even more imbalanced. For persons over age 80, there are only 73 men for every 100 women (Bengston & Lowenstein, 2004). This pattern reflects the fact that men die younger than women, and has important implications for the daily lives of older adults and their families.

## THE CAUSES AND CONSEQUENCES OF GLOBAL AGING

Scholars are not only interested in documenting the pace and level of population aging. They are also concerned with documenting the causes and consequences of such important patterns. As noted earlier, population aging is caused by the relative increase in the older population relative to the younger population. The rise in the number of older persons largely reflects the fact that life expectancy is increasing. Increases in life expectancy are a consequence of changes in how individuals die in the early 21st century. Infant mortality rates have dropped considerably over the past three centuries, and infectious diseases that kill infants, children, and persons of working age have largely been eradicated (or can be treated). Thus, more people are surviving through the difficult early-life years and are living through later life. In later life, the leading causes of disease are conditions that are chronic, meaning older persons can live with diseases such as heart disease or cancer for relatively long time periods. However, these years of survivorship are often marked by physical discomfort, difficult treatment regimens, and expensive health care costs.

These processes have important implications for families, as well as individuals. As people live longer and have fewer children, family structures are transformed, leaving older people with fewer options for care. This erosion of family support has increased demand for federally funded social insurance systems. As social insurance expenditures escalate, countries are carefully evaluating the sustainability of these systems.

Population aging also will have dramatic effects on social entitlement programs, labor supply, trade, and savings around the globe, and may require new fiscal approaches to accommodate a changing world. For example, shrinking ratios of workers to pensioners and people spending a larger portion of their lives in retirement increasingly challenge existing health and pension systems (Bengtson & Lowenstein, 2004; Krug, 2002; Estes, 2001). The expansion of social programs targeted toward the elderly may have the unintended consequence of increasing stigma and perpetuating negative stereotypes of older adults. Younger working adults may perceive that they are funding public programs for the large and growing number of older adults, and may grow to resent their elders (Estes, Biggs, & Phillipson, 2003).

Although many of the challenges of aging are addressed at the national level (as will be elaborated below), population aging can no longer be viewed as a national

problem but as one that affects transnational agencies and communities. Local approaches to addressing the challenges of global aging had some meaning in a world where states were in control of their own destinies, and when *citizenship* and *national boundaries* were clear-cut and readily defined concepts. However, through processes of globalization, nations are increasingly interdependent and the aging of one society may have important implications (and require policy shifts) from other nations. For example, an aged population in one nation (such as Germany) may create the need for the importing of labor from other distant countries, such as Turkey. This is just one example of how globalization shapes nations' individual responses to population aging. To illustrate the diverse ways that global aging is unfolding in three non-U.S. contexts, this entry next briefly highlight key trends across the world: Europe, Asia, and Africa.

**Europe** The population structure of western European countries has changed dramatically since the turn of the 20th century. In 1901 just over 6% of the population was age 65+; this figure increased to 18% by 2001 (Powell, 2005). During the same time period, the population of persons under age 16 fell from 35% to 20%. As a result of these changes, dependency rates shifted—with important consequences for the European labor force. For example, in 1950 there were 12 people aged 15 to 64 to support each one of retirement age. It will be only 4-to-1 by 2050 (Powell, 2005). Some economists fear this will lead to bankrupt pensions, lower living standards, and a labor shortage. Nations including France, Germany, Greece, Italy, Russia, and the Ukraine have already seen an absolute decline in the size of their workforces throughout the 20th century. In the United Kingdom, for example, the percentage of people of working age is projected to drop from 64% in 1994 to 58% in 2031 (Powell, 2005).

These population trends have important implications for the European political climate. For example, Germany has the largest total population in Europe and the third oldest population in the world. As such, the German government faces challenging questions about funding public pensions and health care. Aging issues have started to figure prominently in political discussions prior to 2009 elections, as political parties vie for the elderly vote. The Angela Merkel administration (beginning 2007) has been criticized for increasing pensions while opponents talk about a "war of generations" requiring young people to pay for taxation for elder care.

Germany is not alone in its concerns. As the number of workers per pensioner decreases throughout Europe, there will be pressure on pension provision. This is evident in 2008, in such areas as pensions and long-term care, the retreat of the state made evident in the erosion of State Earnings Related Pay, forcing people to devise their own strategies for economic survival in old age (Phillipson, 1998). In the British context that also impinges on global societies in general: Private pensions are slowly being introduced in order to prevent the burden of an aging population. These are ways in which the state continues to rely on apocalyptic projections, the "demographic time bomb," about aging populations in order to justify cuts in public expenditure (Powell, 2005). Despite these worries, there is also widespread understanding of the unique contributions older persons make to society; older people take much of the responsibility for our social and civic life and for the care of children, the sick and the very old in the community.

**Asia** Asia has the largest population of any continent in the world. As such, they provide a fascinating case for studying population aging. China, in particular, has been identified as having four unique characteristics of population aging (Du & Tu, 2000): unprecedented speed; the rapid growth of the aging population before the completion of modernization; fluctuations in the nation's dependency ratio; and a powerful influence of government population policy. Unlike most other nations in the world, the growth of China's elderly population is partly a consequence of the nation's very restrictive population policy. The nation's "one child" policy punished families who gave birth to more than one child, thus contributing to the relatively small youthful population and relatively large older population. Taken together, these factors mean serious concerns for Chinese policy makers.

Kim and Lee (2007) have argued that the rapidly growing elderly population in China and most of Asia has serious economic implications. However, the magnitude of these implications depends on the (in)ability of individual economies to resolve the demographic burden through changes such as increased pension reform, immigration policy, and extension of retirement age. Like European and North American countries, Asia will ultimately have to tackle issues related to pension reform and the provision of long-term health care services (Cook & Powell, 2007).

Japan has already begun to tackle such issues. In 2007, 17% of the Japanese population was over age 65, and this proportion will near 30% by 2022. From 2005 to 2012, Japan's workforce is projected to shrink by around 1% each year—a pace that will accelerate after that. Economists fear that, besides straining Japan's underfunded pension system (Cook & Powell, 2007), the decline of workers and young families will make it harder for Japan to generate new wealth.

The future challenge of providing for the older adult population is especially urgent in the world's two biggest nations—India and China (Kim & Lee, 2007). Only 11% of Indians have pensions, and they tend to be civil

servants and the affluent. With a young population and relatively large families, many of the older adult population still count on their children for support. Relying on family support will be even more difficult in China as the population continues to age. By 2030 in China, there will be only two working-age people to support every retiree. Yet only 20% of workers have government- or company-funded pensions or medical coverage (Cook & Powell, 2007). At the same time, older adults will have fewer children upon whom to rely for economic and practical support, a consequence of the one-child policy described above.

**Africa** Economic security, health and disability, and living conditions in later life are policy concerns throughout the world, but the nature of the problem differs considerably from continent to continent and between and within countries—especially within Africa. In Africa older people make up a relatively small fraction of the total population, and traditionally their main source of support has been the household and family, supplemented in many cases by other informal mechanisms, such as kinship networks and mutual aid societies. In 2005 Nigeria was among the 30 countries in the world with the largest populations age 60 and over. Nigeria had the largest older population in sub-Saharan Africa, with more than 6 million people age 60 and over; South Africa had just over 3.4 million. Congo and South Africa are projected to have nearly 5 million older people in 2030. Burkina Faso, Cameroon, Cote d'Ivoire, Madagascar, Mozambique, Niger, Senegal, and Uganda are all projected to have their older populations grow to over one million people by 2030 (International HIV/AIDS Alliance & HelpAge International, 2004).

Very little careful empirical research has been undertaken on long-term trends on the welfare of older people in Africa, yet there are several reasons to believe that traditional caring and social support mechanisms are under intense strain (OECD, 2007). African economies, among the poorest in the world, are still heavily dependent on subsistence agriculture, and average income per capita is lower than it was at the end of the 1960s. Consequently, the region contains a growing share of the world's poor. In addition, reductions in fertility and child mortality have meant that, despite the huge impact of the HIV/AIDS epidemic across much of the region, both the absolute size and the proportion of the population age 60 and over have grown and will continue to grow over the next 30 years (Estes, Biggs, & Phillipson, 2003).

In Africa older people have traditionally been viewed in a positive light, as repositories of information and wisdom. And while African families are generally still intact, social and economic changes taking place can weaken traditional social values and networks that provide care and support in later life. Africa has long carried a high burden of disease, including from malaria and tuberculosis; currently it is home to more than 60% of all people living with HIV—some 25.8 million in 2005. The vast majority of those affected are still in their prime wage-earning years, at an age when, normally, they would be expected to be the main wage earners and principal sources of financial and material support for older people and children in their families. Many older people have had to deal with the loss of their own support while absorbing the additional responsibilities of caring for their orphaned grandchildren. Increasingly, then, it appears that African societies are being asked to cope with population aging with neither a comprehensive formal social security system nor a well-functioning traditional care system in place (International HIV/AIDS Alliance & HelpAge International, 2004).

The key issue that must be addressed by public policy and public health researchers in future decades is that a majority of the world's population of older people (61%, or 355 million) live in poorer African countries. This proportion will increase to nearly 70% by 2025. For many countries, however, population aging has been accompanied by reductions in per capita income and declining living standards. Epstein (2001) notes that between 1950 and the late 1970s, life expectancy increased by at least 10% in every developing country in the world, or on average by about 15 years. However, at the beginning of the 21st century, life expectancy remains below 50 in more than ten developing countries, and since 1970 has actually fallen, or has barely risen, in a number of African countries (Phillipson, 1998).

## THE FUTURE OF GLOBAL AGING

Global aging represents a triumph of medical, social, and economic advances, yet it also presents tremendous challenges for many regions of the world. Population aging strains social insurance and pension systems, and challenges existing models of social support traditionally provided by kin (Bengston & Lowenstein, 2004). It affects economic growth, trade, migration, disease patterns and prevalence, and fundamental assumptions about growing older. Global aging will have dramatic effects on local, regional, and global economies. Phillipson (1998) has argued that the personal consequences of aging are shaped by the rise of globalization; globalization exerts unequal and highly stratified effects on the lives of older people (Phillipson, 1998; Estes, 2001).

In the developed world, the high costs of public programs targeting older persons make such programs a frequent target for budget cuts. In less developed countries, older people (particularly women) are strongly

affected by the privatization of health care, and the burden of debt repayments to the World Bank and the International Monetary Fund (IMF) (Estes, 2001). Globalization also has an indirect effect on the lives of older persons, as high levels of cross-national migration disrupt the lives of older adults, especially when their children move across the globe. Older adults also are particularly susceptible to the consequences of global political change and warfare; older persons account for an estimated one-third the world's refugees—a figure estimated at more than 53 million older people worldwide in 2000 (Estes, 2001).

Changes in the age structures of societies also have consequences for the size and characteristics of a nation's labor force (Phillipson, 1998). Nations with older populations often do not have an adequate number of workers and thus may loosen their immigration policies, as a way to increase the size of their youthful populations and thus their supply of workers. Changes in immigration policy, in turn, may alter the very nature of a nation's work force. The foreign-born workforce is growing in most Organization for Economic Cooperation and Development (OECD) countries (OECD, 2007). For example, in the United States, large and growing numbers of medical workers are migrants. Currently, 22% of physicians and 12% of nurses in the United States are foreign-born, with the majority coming from African countries, the Caribbean, and Southeast Asia (OECD, 2007).

Many countries in Asia have developed alternative strategies for addressing the worker shortage that is an inevitable result of population aging. For example, in South Korea and Japan, which have historically strong cultural aversions to immigration, employers such as small factories, construction companies, and health clinics are relying on "temporary" workers from the Philippines, Bangladesh, and Vietnam (OECD, 2007). The implications of global aging also extend to more youthful workers. For example, in China, state industries are struggling over how to lay off unneeded middle-age workers when there is no social safety net to support them (Cook & Powell, 2007).

What really has pushed aging to the top of the global policy agenda, though, is the recognition of increasing fiscal gaps in the United States, Europe, Japan, and elsewhere—and these financial threats could worsen as large proportions of the population reach retirement age. While the Social Security system in the United States is projected to remain solvent until at least 2042, the forecast is more pessimistic for social security programs in Europe. In the United States most citizens have private savings plans to help supplement the often meager payments provided by social security. In much of Europe, however, as many as 90% of all workers rely almost entirely on public pensions to support them in old age (Walker & Naegele, 2000). For example, Austria guarantees 93% of one's earnings after retirement, and Spain offers 94.7%. As noted earlier, declining numbers of youthful workers in industrialized nations means a declining number of persons are paying into the system that ultimately supports retirees (Krug, 2002).

These two key consequences of global aging—the potential labor shortage, and high costs of pensions to growing numbers of older adults—have forced policy makers in several nations to question practices such as mandatory retirement and policies regarding retirement timing (Powell, 2005). Similarly, policy makers are debating at the age at which individuals should be fully entitled to social welfare benefits such as health insurance provision (e.g., Medicare in the United States). Nation states with extensive social programs targeted to the older population—principally health care and income support programs—find the costs of these programs escalating as the number of eligible recipients grows and the duration of eligibility lengthens due to increases in lifespan (Bengtson & Lowenstein, 2003).

Governments may be limited in how much they can reshape social insurance programs by raising the age of eligibility, increasing contribution rates, and reducing benefit levels. Consequently, shortfalls may need to be financed using general revenues. Projections of government expenditures in the United States and other OECD countries show increases in the share of gross domestic product devoted to social entitlements for older populations. In some cases, this share more than doubles as a result of population aging (OECD, 2007).

The financial costs associated with providing for the massive older population are also borne by individuals and families. Family members often must pay for long-term care or medical care of their aged relatives, in those cases where the elderly person does not have sufficient personal resources to cover such expenses. Population aging also has indirect effects on the economic well-being of individuals in a society. For example, the largest component of household wealth in many countries is housing value. Home values could drop sharply if large numbers of older homeowners try to sell houses to smaller numbers of younger buyers.

Global aging affects not only the value of homes, but the living arrangements maintained over the life course. For example, older people's living arrangements reflect their need for family, community, or institutional support. Living arrangements also indicate sociocultural preferences—for example, some choose to live in nuclear households whereas others prefer extended families (Estes, Biggs, & Phillipson, 2003). The number, and often the percentage, of older people living alone are rising in most

countries. In some European countries, more than 40% of women age 65 and older live alone (Walker & Naegele, 2000). Even in societies with strong traditions of older parents living with children, such as in Japan, traditional living arrangements are becoming less common. In the past, living alone in older age often was equated with social isolation or family abandonment (Phillipson, 1998). However, research in many cultural settings illustrates that older people, even those living alone, prefer to be in their own homes and local communities (Gilleard & Higgs, 2001). This preference is reinforced by greater longevity, expanded social benefits, increased home ownership, elder-friendly housing, and an emphasis in many nations on community care (Estes, Biggs, & Phillipson, 2003). As people live longer and have fewer children, family structures are also transformed (Bengtson & Lowenstein, 2004). This has important implications in terms of providing care to older people. Most older people in the early 21st century have children, and many have grandchildren and siblings. However, in countries with very low birth rates, future generations will have few if any siblings. As a result of this global trend toward having fewer children, people will have less familial care and support as they age (Bengtson & Lowenstein, 2004).

Although doomsayers believe that an aging population is necessarily plagued with physical and economic problems, Longino (1994) offers a more optimistic perspective. He argues that technological developments, such as better preventive medicine and the development of assistive devices, as well as individual- and family-level adaptation (such as the development of elderly-friendly housing arrangements) mean that the future of aging nations may be quite positive.

The aging of the global population is without parallel in human history (Bengston & Lowenstein, 2004). If the level and pace of population aging persist in the coming decades, by 2050 the number of older people globally will exceed the number of young for the first time in history. As a result, nations throughout the world are confronted with profound challenges pertaining to illness and health care, older adults' access to housing and economic resources, including pension provision. The implications of global aging affect not just older adults, but individuals at all stages of the life course, families, household, governments, and even cross-national relations.

**SEE ALSO** Volume 3: *Demographic Transition Theories; Epidemiologic Transition; Life Expectancy; Mortality; Population Aging.*

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***Jason L. Powell***

## GRANDPARENTHOOD

Grandparenthood constitutes a life-course transition (becoming a grandparent) as well as a life-course stage (being a grandparent). For individuals with multiple grandchildren, one could even speak of "grandparenthoods" because relationships with each individual grandchild differ by the grandchild's lineage (i.e., whether the grandchild is a child of one's daughter or son), birth order, gender, or geographical distance to the grandparent. The experience of grandparenthood also varies over time, both historically and within grandparents' and grandchildren's life course, and across divergent cultural subgroups. From a different perspective, grandparenthood can also be viewed as a social position and a social role akin to parts (positions) in a drama that are played by different actors (role incumbents).

### GRANDPARENTHOOD AS SOCIAL POSITION

Social structures provide a blueprint for what grandparenthood is and how it should be enacted. Societies in North America and Western Europe with their bilateral kinship systems acknowledge grandparents on both the mother's and father's sides, but other societies with patrilineal or matrilineal systems may assign the position of grandparent only to the father's or mother's parents. In addition, individuals other than blood relatives may be viewed as grandparents. Although grandparenthood through adoption is practiced in many societies, grandparenthood through remarriage (stepgrandparents) or grandparenthood through artificial fertility methods are mostly phenomena of modern societies. Because these modern types of grandparenthood lack institutionalization (e.g., there are no separate terms for stepgrandparents acquired through the grandparents' own remarriage or for those acquired through remarriage of the grandparents' children), they can foster ambiguity in individuals' self-perceptions as grandparents (Ikels, 1998).

Social norms prescribe grandparents' rights and obligations. Once again, there is considerable cross-cultural and historical variation. Some traditional societies (e.g., traditional China and to some extent modern rural China), endorsed coresidence of young couples with the husband's parents (Ikels, 1998). In contrast, coresidence with grandparents, although on the rise, remains quite rare in the contemporary United States. Generally, the rights and obligations of grandparenthood are ill defined in modern European and North American societies. Laws pertaining specifically to grandparents' rights and duties are also rare. There is some requirement of economic support in cases of teenage parents, and grandparent visitation rights permit grandparent–grandchild contacts even against parents' wishes, although only under select circumstances (Hill, 2001). One of the more widely accepted norms is that of parental independence and noninterference on the part of grandparents in the parental domain. Consequently, grandparents rarely view themselves as disciplinarians of their grandchildren, and they resent having to take on this function under certain circumstances, for example, when grandparents raise their grandchildren (Landry-Meyer & Newman, 2004). However, even in this regard some variation exists. African-American grandparents seem more inclined to become directly involved in parenting functions and to assume authority roles vis-à-vis their grandchildren than their White counterparts (Vandell, McCartney, Owen, Booth, & Clarke-Stewart, 2003).

Despite this vagueness of social norms, grandparents assume important functions in modern societies. Their involvement in child care and in raising grandchildren reduces the need for formal child care and foster care, and their help in times of family crises assists families and grandchildren in coping with disruptive life events such as divorce. Grandparents also play a significant economic role as consumers of products for children, through their financial support to grandchildren and their parents, and through child care for employed mothers.

Unlike in some preindustrial societies where grandparenthood constituted a basis for social status in the community (Ikels, 1998), social status in the United States and Western Europe is typically linked to individuals' educational and economic achievements. The social significance of grandparenthood is acknowledged through special events such as Grandparents' Day, but one may wonder to what extent these events derive from true esteem for grandparents rather than from marketing initiatives by selected industries (where would greeting card companies be without family events?).

Like parts in a play, social positions need to be filled by actors. To what extent and by whom the position of grandparent is filled depends on fertility and mortality patterns in two successive generations. Increased longevity and relatively low ages at child birth during the middle of the 20th century contributed to a dramatic rise in the supply of living grandparents to grandchildren. In 2000 more than 40% of 10-year-old children had four living grandparents compared with only 6% of children of that age in 1900. The duration of having living grandparents rose as well. In 1900 only about 20% of children age 30 had living grandparents, compared with a projected 80 percent in 2020 (Hagestad & Uhlenberg, 2007). Further increases in longevity will support this trend into the future. However, delays in childbearing during recent decades will undermine it. Because childbearing patterns vary considerably by racial and ethnic group, the experience of grandparenthood is likely to become more diversified. Late grandparenthood is likely to prevail among non-Hispanic Whites and Asians and Pacific Islanders, whereas African Americans and especially Hispanics are likely to continue to become grandparents in middle age.

Thus, by the middle of the 21st century more grandchildren, and especially grandchildren from selected racial and ethnic groups, will again experience grandparents' deaths at earlier ages, have older grandparents during their childhood, and be less likely to have living grandparents well into their adulthood. From the grandparents' perspective, however, the supply of grandchildren has declined over the 20th century from an average of more than 12 in 1900 to between 5 and 6 by the late 1900s (Uhlenberg & Kirby, 1998), and this trend is expected to continue in the 21st century. The number of older individuals remaining without grandchildren (due to childlessness in either the grandparent or parent generation) has varied over the last century. Rates of childlessness were relatively high at the beginning of the 20th century and peaked during the Great Depression, then declined during the baby boom era (ca. 1947–1964) and have increased since the late 20th century. Thus, a noteworthy proportion of individuals especially of White and Asian descent will remain without grandchildren (Szinovacz, 2007).

It has been argued that longer duration of grandparenthood and reduced number of grandchildren will further the intensity and quality of grandparent–grandchild relationships (Hagestad & Uhlenberg, 2007). However, this view may be overly optimistic. Other demographic trends, such as the delay in childbearing age, the continued high divorce rate, and declining fertility, can undermine the quality of intergenerational relationships. Adolescent and older grandchildren may be increasingly exposed to frail and demented grandparents. They may also lose contacts with grandparents especially on their father's side after parents' divorce, and as fewer adult children are available to care for their frail parents, grandchildren may become more involved in grandparents' care. These experiences, too, will vary widely across diverse population groups, leading to considerable heterogeneity in the experience of grandparenthood (Szinovacz, 2007).

## GRANDPARENTHOOD TRANSITIONS

In contrast to most other life-course events, the transition to grandparenthood is a countertransition, that is, a transition contingent on others' behaviors. In rare cases—such as when parents are estranged from their children or when fathers are not even aware that they are fathers—grandparents may even remain ignorant about their transition to grandparenthood. Individuals initiate the transition themselves only when they remarry a partner who already has grandchildren or acquire grandchildren through adoption. Thus, some individuals' aspirations to become grandparents may be thwarted by their children's decisions to delay parenthood or to remain childless, whereas others may enter grandparenthood at a time when they have little desire to become a grandparent. Because most studies have focused on current grandparents rather than on the transition to grandparenthood, very little is known about how this transition transforms grandparents' lives, their marriages, or their relationships with the grandchildren's parents. What little is known suggests that grandparenthood is usually welcomed by the grandparents and tends to strengthen grandmother-mother bonds (Fischer, 1988). However, grandparenthood that comes too early can lead to strain in grandparents' lives and accelerate self-perceptions as aged (Kaufman & Elder, 2003).

The grandparent role is dynamic; it changes over time and varies across relationships with specific grandchildren. Although one's status as grandparent is established with the birth or adoption of the first grandchild, additional grandparenthood transitions occur as children have more children or additional children become parents. Current research provides little insight into the meanings of the first and subsequent grandparent transitions. However, as more grandchildren are born, grandparents need to divide their attention among these grandchildren. Some evidence suggests that frequent visits with the grandchildren from a single child are more common than frequent visits with all grandchildren from multiple sets of children. Conversely, having grandchildren from several children increases the chances of frequent contacts with the grandchildren from at least one child (Uhlenberg & Hammill, 1998). To further understanding of these and other dynamics of the grandparent role, it will be important to explore the interlinkages in the lives of all grandparents and all grandchildren.

## THE GRANDPARENT ROLE

Grandparenthood links the lives of three generations—grandparents, parents, and grandchildren. Consequently, the enactment of the grandparent role depends not only on the grandparents themselves but also on the attitudes and behaviors of parents and grandchildren (Szinovacz, 1998). Considerable evidence indicates that parents mediate grandparent–grandchild relationships, at least until grandchildren reach adulthood. Conflicts between parents or divorce in the middle generation as well as strained relationships between a parent and his or her children-in-law can undermine grandparent–grandchild relationships (Fingerman, 2004). Similarly, divorce on the part of the grandparents themselves has been linked to reduced closeness to grandchildren, possibly because it undermines grandparent–parent relationships (King, 2003).

Although parental mediation is important, it is certainly not the only factor impinging on the frequency or quality of grandparent–grandchild relationships. Other important factors that influence these interactions include geographical distance, urban versus rural background, age and number of grandchildren, and family structure and history. Relationships tend to be closer if grandparents live closer to the grandchildren, if the grandchildren are younger, or if grandparents knew their own grandparents (Chan & Elder, 2000). Grandmothers and grandfathers also approach the role somewhat differently. Some studies suggest that grandmothers maintain closer relationships to their grandchildren, but others demonstrate considerable involvement by grandfathers as well (Mann, 2007). Research further shows that both events in grandparents' and in grandchildren's lives exert some influence on grandparent–grandchild relationships. For example, grandchildren's transition to college seems to further closer ties between grandparents and grandchildren from the perspective of both grandparents and grandchildren (Crosnoe & Elder, 2002).

Numerous studies attest to the variety of grandparenting activities and styles. These studies reveal different types of grandparenting, depending on which dimensions (e.g., frequency and type of activities with grandchildren, role meaning and salience, instrumental assistance, quality of relationships with grandchildren, or influence) were used to create such typologies. Grandparents can be companions, babysitters, providers of emotional support, story tellers, family historians, socialization agents, disciplinarians, or transmitters of values and culture. The latter activity seems particularly important among Native Americans as it serves to maintain tribal traditions.

Variation also exists in how much grandparents become involved in their role. For instance, one study (Mueller, Wilhelm, & Elder, 2002) distinguished among five types of grandparents—influential (those ranging high on contact, activities, intimacy, helping, instrumental assistance, and authority), supportive (grandparents who demonstrate a relatively high level of all functions except for particularly low authority), passive (those with relatively low involvement in any functions), authority oriented (those with relatively low involvement in all functions except for high authority), and detached (those with very low involvement across all functions). Close to 40 percent of grandparents exhibited either the influential or supportive patterns, whereas slightly over 25 percent were detached. This suggests that most grandparents attribute high salience to this role and derive gratification from close contacts with their grandchildren. Thus, claims by some authors that grandparents have opted out of the involved grandparent role (Kornhaber, 1996) remain mainly unsubstantiated.

Another indicator that grandparents continue to play an important role especially in family crises (thus the reference to grandparents as family watchdogs) is the increased prevalence of grandparents raising grandchildren. According to the 2000 U.S. Census, more than 2.4 million grandparents had responsibility for raising grandchildren in their households. Assumption of this responsibility prevails among grandmothers and minorities, especially African Americans, Native Americans and Pacific Islanders, Hispanics, and those of other races. And least common among Whites and Asians (Simmons & Dye, 2003). Grandparents raise grandchildren mostly when the parents are either dead or unable or unwilling to carry out parental responsibilities because of various reasons including illness, drug abuse, or incarceration. Debate continues about how raising grandchildren affects grandparents' lives. Research suggests that grandparents who assume this role score lower on mental health measures (e.g., depression) than other grandparents, but other effects such as the impact on grandparents' physical wellbeing or economic situation remain unclear. Even though grandparents raising grandchildren typically score lower on physical health and higher on poverty than others of their age, this finding largely reflects the greater vulnerability among grandparent populations who become surrogate parents and not effects of the transition to surrogate grandparenthood (Hughes, Waite, LaPierre, & Luo, 2007; Minkler & Fuller-Thomson, 2005).

## THE FUTURE OF GRANDPARENT RESEARCH

Research has demonstrated that grandparenthood continues to be a significant although not necessarily prestigious role in modern societies and within families. Grandparents are engaged in many activities with their grandchildren and derive satisfaction from their involvement with

grandchildren. It is known that such involvement varies across cultures and population subgroups as well as over the life cycle. Nevertheless, most studies remain static by focusing on grandparents at a specific point in time. Longitudinal studies (in which data are collected about individual lives at multiple points over time) are needed to explore how the grandparent role changes over time and in response to specific transitions in the lives of both grandparents and grandchildren. For example, how does the enactment of the role change in response to grandparents' retirement, their own illness, or the illness of a grandparent's spouse? How does it change in response to grandchildren's development, their entry into school, or their dating and marriage?

There is also a lack of information about intrafamilial variations in grandparenthood, that is, how grandparents relate to different grandchildren. Furthermore, little is known about the intricacies of grandparents' relationships with each other. Do close relationships between maternal and paternal grandparents foster relationships with the grandchildren? Will paternal and maternal grandparents compete with each other, especially as the supply of grandchildren declines? More information is needed about differences and similarities in grandfathers' and grandmothers' relationships with their grandchildren. Most important for understanding such differences will be an approach that takes the perspective of the grandparent couple; that is, do married grandparents split grandparenting tasks or do they engage jointly in activities with their grandchildren, and how do married grandparents' activities with grandchildren differ from those of single grandparents?

To answer these questions, it will be essential to rely on a life-course perspective that emphasizes heterogeneity in grandparenting across cultures and over the life span and attends to the interlinked lives of grandparents, parents, and grandchildren. From a policy and programmatic perspective, it will be essential to shift from a focus on intergenerational conflict to a stronger emphasis on enabling grandparents to take on heavy responsibilities for grandchild care without detrimental consequences to the grandparents' or the grandchildren's well-being. All evidence points to the fact that grandparents are not abandoning their grandchildren or other family obligation to pursue leisure interests. However, it is often particularly vulnerable groups of grandparents who face overly demanding care responsibilities, and these grandparents need both social and material supports. The retrenchment of social welfare for the elderly is likely to undermine especially vulnerable grandparents' ability to attend to increasing care responsibilities.

**SEE ALSO** Volume 1: *Grandchildren;* Volume 2: *Social Roles;* Volume 3: *Caregiving; Family and Household Structure, Later Life; Intergenerational Transfers; Parent-Child Relationships, Later Life.*

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# H

## HEALTH BEHAVIORS, LATER LIFE

Understanding the social and behavioral determinants and outcomes of health-related behaviors, such as diet, exercise, and smoking, in later life is crucial to enhancing the lives of a large and increasing older adult population in the United States and around the world. In particular, understanding the causes and effects of specific modifiable health behaviors may increase health-promoting choices in the population, reduce morbidity and early mortality, decrease medical costs, and improve health services and policies aimed at older adults. An overview of patterns and trends in body weight, exercise, smoking, and substance abuse in later life are described here. More information about these health behaviors is presented in the entry on Health Behaviors in Adulthood.

### BODY WEIGHT

Extremes in body weight and body mass index (BMI)—that is, being either underweight or obese—are risk factors for poor health outcomes in later life. BMI is a measure of body fat that is derived from measurement of height and weight. Both high and low BMIs are associated with increased rates of functional impairment and disability; increased prevalence of diseases such as diabetes, hypertension (i.e., high blood pressure), and arthritis; and increases in the amount of care required in later life.

The general life course trend in body weight is that individuals tend to gain weight through middle adulthood into early old age and then plateau or decline in weight at very advanced ages (Jenkins, Fultz, Wray, & Fonda, 2003). This suggests that middle age is a time of life in which weight management is particularly important to overall health and especially to health concerns associated with excess weight. In contrast, older age is often marked by weight loss, sometimes related to disease. Also, being obese for longer lengths of time throughout the life course may have particularly adverse effects on health (Schafer & Ferraro, 2007).

Body weight and diet, like many other health behaviors, are affected by major life events. Widowhood is one example of a life event that may affect health behaviors. For a variety of reasons, such as decreased social contacts and loss-related depressive symptoms, widowed older adults are likely to consume a diet that provides insufficient calories and nutritional diversity (Quandt et al., 2000). Retirement also has an impact on eating behavior. Retirement contributes to older adults eating out less often, likely freeing up time and allowing them to spend more time cooking. However, retirement also may contribute to a more sedentary lifestyle that may counteract any beneficial health effects that eating more meals at home might bring (Chung, Popkin, Domino, & Sterns, 2007).

Being able to function independently is an important component of an older adult's well-being. As such, high BMI is a health risk factor that can have a profoundly negative influence on functional independence. There are several physiological pathways for the influence of obesity on poorer physical functioning in older age. First, excessive body weight typically contributes to inflammation of joint tissue, making ambulating (i.e., movement) painful and difficult (Walford, Harris, & Weindruch, 1987). Second, excessive body weight also increases the amount of mechanical stress placed on body joints, elevating one's risk of osteoarthritis (Clark & Mungai, 1997) and

decreasing functioning. Third, excess weight is associated with a sedentary lifestyle, which contributes to both decreased muscle strength and cardiovascular fitness and may eventually result in difficulties with physical functions such as walking several blocks or climbing flights of stairs (Himes, 2000). Fourth, side effects and symptoms associated with a broad range of diseases that are more common among obese persons may make movements difficult.

Being underweight in later life may contribute to or signal adverse health outcomes due to its association with the complex syndrome of frailty—a condition characterized by wasting and a decrease in the body's reserves (Fried, Ferrucci, Darer, Williamson, & Anderson, 2004). One estimate suggests that 2.9% of community-dwelling adults age 70 and older are underweight in the United States (Jenkins, 2004). Low BMI has been suggested as one indicator of the frailty syndrome (Fried et al., 2001). Frailty in older adults corresponds to increased risk for disease, disability, and institutionalization. Being underweight may be a proxy for frailty and thus is associated with an increased prevalence of a range of adverse health outcomes in later life. In sum, obesity is a risk factor for various diseases, whereas being underweight may be a consequence of disease.

Although both extremes in body weight contribute to certain adverse health outcomes, obesity in older age may not necessarily contribute to early mortality. Whereas obesity in middle age is associated with higher disease and mortality rates, especially among some non-White populations, obesity among older adults may indicate a physical robustness, particularly in comparison with being underweight. Rather, older obese persons represent a select population. Obesity contributes to early morality at midlife, and those obese persons who survive to later life are particularly robust. This physical robustness may be in part due to other positive behavioral, environmental, or genetic factors that may contribute to a resistance to the heath problems associated with obesity.

## EXERCISE

Lack of exercise has deleterious effects on health, with a particularly negative impact on physical functioning. Older individuals who do not participate in regular vigorous physical activity are more likely to experience the onset of functional impairment (Jenkins, 2004) due to decreased muscle tone and cardiovascular fitness. Over the past several decades, health professionals and policy makers alike have realized and begun to increase awareness of the benefits of exercise in later life. This is particularly important for future generations of older adults, who are more likely to have worked in sedentary white-collar or technical jobs, compared to prior cohorts who worked in physically active jobs, often in agricultural or manufacturing sectors.

Exercise programs targeted toward older adults have been used as effective interventions to improve health outcomes. In particular, such exercise programs are suggested as effective interventions for frailty (Fried et al., 2004). Exercise may also improve balance among older adults and thereby decrease the likelihood of dangerous falls.

Four broad domains of exercise are recommended for older adults: physical activities that improve endurance, balance, strength, and flexibility (National Institute on Aging, 2007). Improvements in each of these domains are thought to translate to improvements in health. More specifically, participating in activities that improve aerobic capacity aids in the prevention of disease and helps improve mood. Participating in exercises that build musculature may help older adults to function independently longer.

## SMOKING

The effects of smoking on health have been studied extensively, and a substantial and growing body of literature speaks to smoking's detrimental effects on a range of health outcomes. Smoking has been shown to be associated with various life-threatening health conditions such as heart disease (Lahiri & Song, 2000), increases in mortality (Smith, Taylor, Sloan, Johnson, & Desvousges, 2001), and functional difficulties (Ostbye, Taylor, Krause, & Scoyoc, 2002). The health problems associated with smoking are more likely to affect older smokers compared to younger smokers, in part because they have been smoking longer (American Lung Association, 2007). Older smokers, compared to their younger counterparts, also are less inclined to think smoking has or will have a negative impact on their health (Rimer et al., 1990). This attitude likely contributes to the added challenge of creating effective smoking cessation programs for this population.

An additional difficulty is that the current generation of older adults has the highest smoking rate of any other generation in the United States in the early 21st century. (American Lung Association, 2007). Many developed their smoking behaviors during the 1940s and 1950s, when smoking was more socially acceptable and common. This social context shaped how they viewed their behavior and likely influenced their desire to quit. Successful smoking cessation programs should consider the social environment in which these older adults developed their behaviors to better equip them to stop smoking.

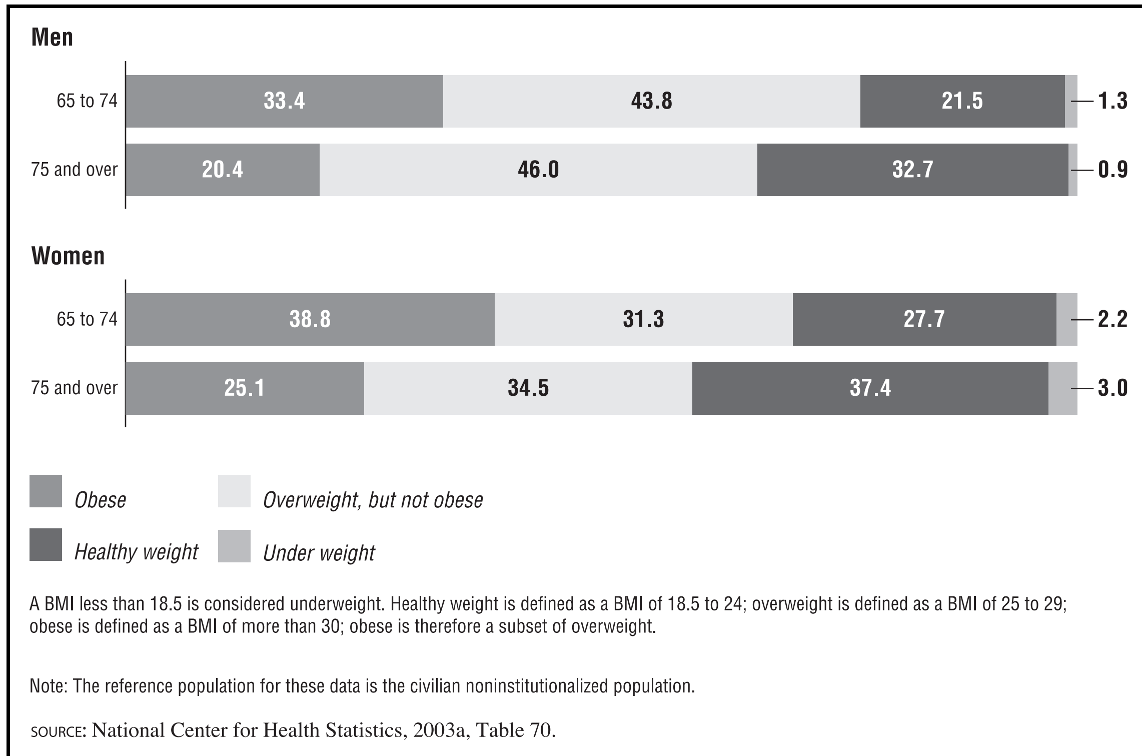


***Figure 1.*** *Percent distribution of people aged 65 and over who were underweight, healthy weight, overweight, and obese by age and sex: 1995–2000.* CENGAGE LEARNING, GALE.

## ALCOHOL AND DRUG USE

The effect of alcohol use on mortality has long intrigued social scientists, health professionals, and policy makers alike. Unlike smoking behavior, however, alcohol use has received much less attention in regard to its effects on disease and morbidity (excluding cardiovascular disease, where fairly substantial attention is given; Perreira & Sloan, 2002). This is unfortunate because the misuse of alcohol, particularly among older adults, may have deleterious effects on various aspects of health and functioning, even while moderate amounts of alcohol consumption may have beneficial effects on certain aspects of cognitive and cardiovascular health. In sum, moderate drinking is associated with better health, whereas abstinence and excessive drinking has negative effects on health and mortality.

The use and especially the misuse of alcohol have different implications for older adults than for their younger counterparts. Interactions of prescription drugs and alcohol are one concern. The body's ability to eliminate drugs from the system becomes less efficient with older age. That, combined with a higher rate of prescription drug usage among older adults, makes alcohol consumption, even in moderation, potentially more problematic among older than among younger populations.

Alcohol and drug usage varies among older adults both in frequency and correlates. Alcohol use, even problematic alcohol use, is much more common than illicit drug use among the elderly population. In 2000 nearly nine times as many older adults reported having a drinking problem (i.e., heavy and binge drinking) than using an illicit drug in the prior month (Substance Abuse and Mental Health Services Administration, 2001). White older adults were more likely to report using alcohol and illicit drugs in the prior month, compared to Hispanic older adults. Both alcohol use and problem drinking were higher among older adult males than older adult females. The most common types of drugs misused by older adults in 2000 were marijuana and prescription drugs (in particular psychotherapeutics; Substance Abuse and Mental Health Services Administration, 2001).

## CONCLUSION

The study of health behaviors in later life is a rapidly expanding and exciting area of research. New data collection efforts are allowing researchers to better understand problems that impact the health of older adults. One example of such data collection efforts are large-scale national surveys that follow older adults as they age, such

as the Health and Retirement Study. New technology now enables researchers to easily collect and analyze biomarkers (such as cholesterol, blood sugar levels, and DNA) on large numbers of individuals. Future directions in research should take advantage of such readily available high-quality data to better understand aging patterns and cohort changes in regard to the health behaviors of older adults.

International comparisons among older adults in regard to various health behaviors show some interesting variability. For example, when comparing England and the United States, older adults are similar in regard to smoking behavior, older adults in England tend to drink more heavily, and there is a higher proportion of obesity in the United States (Banks, Marmot, Oldfield, & Smith, 2006). This suggests the need for even further international collaborations, where researchers can approach solutions to problem behaviors differently and learn from one another.

In sum, the cumulative effect of engaging in risky health behaviors may result in poorer health outcomes throughout adulthood and older age. However, it is important to note that changing behaviors and engaging in positive health behaviors such as exercising, smoking cessation, and healthy weight maintenance can still have some positive effects on health even if the behavior change is initiated later in life.

SEE ALSO Volume 2: *Obesity, Adulthood;* Volume 3: *Arthritis; Cancer, Adulthood and Later Life; Cardiovascular Disease; Diabetes, Adulthood and Later Life; Frailty and Robustness.*

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***Kristi Rahrig Jenkins***

# HEALTH CARE USE, LATER LIFE

Thanks to the rapid decline in the death rate over the last 150 years, the final stage of the life course now usually begins at age 65. More people reach that milepost than ever before, making old age a common experience shared

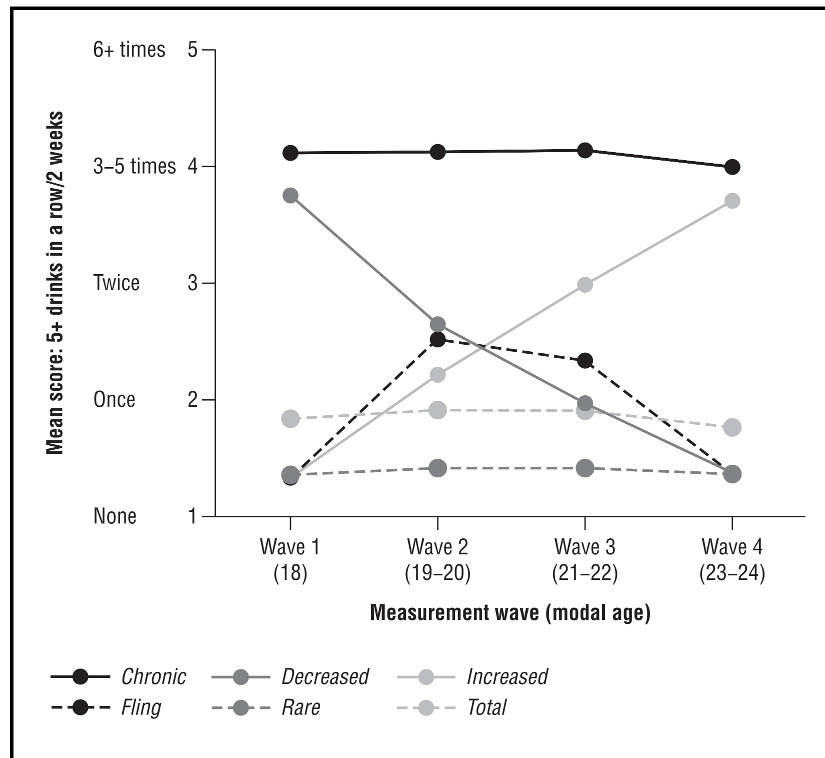



***Figure 1.*** *Health care spending for persons aged 65 and older, by types of service. 2004.* CENGAGE LEARNING, GALE.

by many. The typical view of this stage of the life course is that health and abilities decline, leading to much greater use of health care. Although statistics support this view as a generalization, individuals' experiences vary enormously, with many people remaining robust and able as long as they live, and others suffering from a legacy of poor health and declining faculties accumulated well before old age.

Since the enactment in 1965 of Medicare, the U.S. federally funded program of health insurance for the elderly, health care use by those in later life in the United States has not only been underwritten but also shaped by the program. Because of this federal responsibility, data on health care use by the elderly are more complete and comprehensive than for any other age group. Primary sources of data are the administrative records of the program itself; those of the Medicaid program, which pays for much of nursing home care; nationally representative surveys of the U.S. population, including the elderly, conducted by the National Center for Health Statistics; and surveys of Medicare enrollees conducted by the Centers for Medicare and Medicaid.

Almost the entire elderly population is enrolled in Medicare. In 2005, the U.S. Census Bureau estimated the population 65 and older at about 37 million. Medicare reported that nearly 36 million of them (96.9%) were enrolled in the program. (Since 1972, Medicare has also covered disabled people under 65 and almost 7 million were enrolled in 2005.)

## OVERVIEW OF HEALTH CARE USE IN LATER LIFE

The elderly consume medical services in amounts disproportionate to their numbers in the population. In 2004, people aged 65 and over comprised 12.4% of the U.S. population, but consumed 34% of the nation's personal health care spending, almost $15,000 for each elderly person (Hartman, Catlin, Lassman, Cylus, & Heffler, 2007). Medicare paid half the cost. Private health insurance, Medicaid, and payments by the elderly and their families each accounted for 14 to 16%.

Figure 1 shows the major categories of service covered by these expenditures: inpatient hospital care; outpatient care in physicians' offices and clinics; outpatient prescription drugs; care in nursing homes; and other services. The figure and all expenditures reported in this section are based on National Health Expenditure data, a system of accounts maintained by the Centers for Medicare and Medicaid Services that provides a comprehensive look at the nation's annual health care spending over

the past 50 years, with detail by type of service, payer, and age group (Hartman, Catlin, Lassman, Cylus, & Heffler, 2007).

## HOSPITAL CARE

From 1965 to 1983 the rate of hospitalization among the elderly rose steadily, from 249 hospital stays per 1,000 elderly people to 413 per 1,000. With the introduction in 1983 of prospective payment for hospitals, a system of payment rates set in advance and based on diagnosis, which replaced the earlier system of reimbursing costs, hospital stays declined to a low of 334 per 1,000 elderly in 1990. Partly because of the continued aging of the population, use has risen since then, to 360 stays per 1,000 elderly in 2005. The average length of stay has declined steadily for elderly people, from 10.7 days in 1980 to 5.5 days in 2005. Days of hospital care, a combination of the number and length of stays, were 4,098 per 1,000 elderly in 1980, but only 1,988 by 2005. Despite these declines, expenditures for hospital care have risen faster than inflation. In 1987, hospital care for the elderly cost $67 billion, or $2,248 per person; by 2004, the amount was $194 billion, or $5,403 per person (Hartman, et al., 2007.)

## PHYSICIAN AND CLINICAL SERVICES

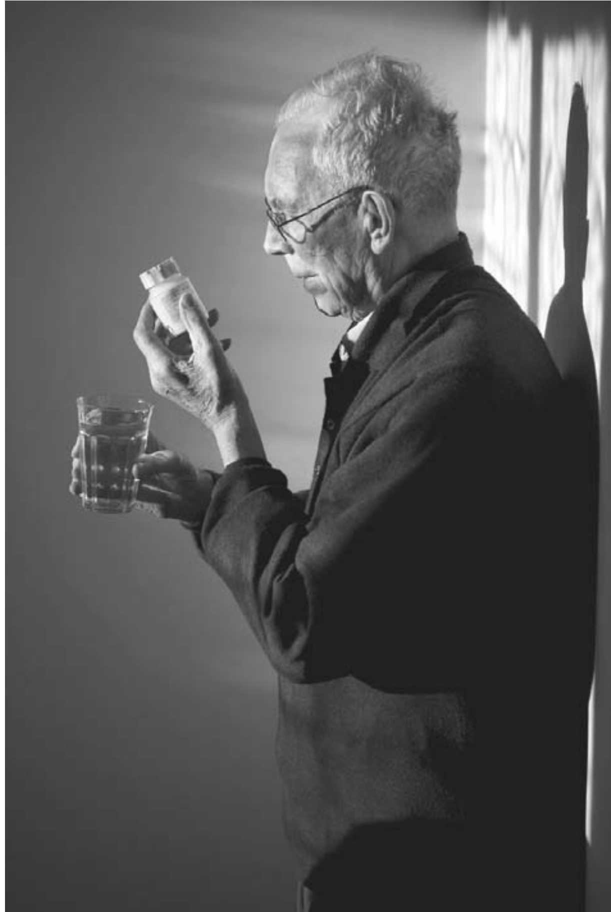
In 2005, 94% of the noninstitutionalized elderly visited physicians' offices, hospital outpatient departments, and hospital emergency departments (National Center for Health Statistics, 2007). The overwhelming majority of these visits were made to physicians' offices, with about 10% to hospital outpatient and emergency departments (Cherry, Woodwell, & Rechtsteiner, 2007). Spending for these services, the second largest category of health expenditure, grew from $32 billion, or $1,075 per person, in 1987 to $109 billion, or $3,024 per person, in 2004.

## PRESCRIPTION DRUGS

With the advent of medications to prevent and control chronic disease, such as agents to lower blood pressure and cholesterol, the use of prescription drugs has become nearly universal among the elderly. Spending for prescription drugs was $56 billion in 2004, 10.5% of personal health care spending for the elderly, and up from 5.9% in 1987. In 2006, Medicare introduced a prescription drug benefit to help pay the rising costs.

## NURSING HOMES

About 1.4 million people were in nursing homes in 2005, most of them aged 65 and over. Additional elderly people are in psychiatric or chronic disease hospitals, Veterans Administration hospitals, and other long-term care facilities. In general, elderly residents of these institutions suffer from multiple chronic conditions and functional impairments. In 2004 nursing home costs for the elderly amounted to $91 billion.



***Pill use.*** *With the advances in health care, the elderly must often take many pills on a daily basis.* © BRUNO EHRS/CORBIS.

## OTHER HEALTH SERVICES

The aged population uses many additional health services: other professional services (e.g., private-duty nurses, chiropractors, podiatrists, optometrists, therapists), home health, dental, other personal health care, and durable and other medical equipment. The cost of these services and supplies amounted to $82 billion in 2004.

## LONG-TERM CARE

In addition to medical care, many elderly people who have lost some capacity for self-care require a range of social, personal, and supportive services. *Long-term care* is defined as physical care over a prolonged period for people incapable of sustaining themselves without this care. It involves a spectrum of services responding to different needs across

a range of chronic illness and disability. These services cross the boundaries between income maintenance and health, social services, and housing programs.

In 2004, 17 million elderly people needed assistance with activities of daily living (ADLs), and instrumental activities of daily living (IADLs), two classifications often used in research (National Center for Health Statistics 2007). ADLs are the basic tasks of everyday life such as eating, bathing, and dressing. IADLs encompass a range of activities that are more complex, such as handling personal finances, shopping, traveling, using the telephone, and taking medications. About 80% of the elderly who need long-term care live at home or in community-based settings such as assisted living facilities (Eckenwiler, 2007). Many are cared for by family and friends, who may themselves be elderly. Research projects in the United States have focused on developing alternative ways to provide long-term care services, such as adult day care, home health, meals-on-wheels, and respite care. Most of these services are aimed at maintaining the independence of the aged or disabled person at home to avoid institutional placement, often viewed as a measure of last resort.

## USE OF SERVICES BY AGE AND GENDER WITHIN THE ELDERLY

The elderly use more health care than younger people, and, within the elderly group itself, the same pattern continues: The oldest old use more health care than younger elderly. Differences by age, gender, and other demographic and socioeconomic characteristics are documented not only by the Medicare program, but also by the surveys of the National Center for Health Statistics. These surveys are the source of the summary tables published each year in the *Statistical Abstract of the United States* (e.g., U.S. Census Bureau, 2008) and in *Health, United States* (see National Center for Health Statistics, 2007), two good starting points for learning about health care use in later life and for identifying the surveys that support in-depth research. (Data not otherwise attributed in this section come from various *Statistical Abstracts*.)

The National Hospital Discharge Survey, which has sampled hospital records annually since 1965, is the nation's benchmark for data on hospital care. Drawing on this survey, Figure 2 shows trends in hospital days per 1000 persons, by age within the 65 and older group (Kozak, DeFrances, & Hall, 2006; Gillum, Graves, & Wood, 1998). The long-term trend described earlier holds true at each age: Hospital use rose until the introduction of prospective payment in 1983, and has declined since then. Throughout the period, however, the youngest elderly used less hospital care than the oldest. In 2004 people aged between 65 and 74 years averaged just over 1,400 hospital days per 1,000, compared with almost 2,500 for those aged between 75 and 84 years, and 3,400 for those 85 and older. As noted earlier, hospital days combine the number of hospital stays during a year and the length of those stays to summarize the time spent in the hospital by the average person in the age group.

Three surveys provide data on the use of physician and clinic care: the National Health Interview Survey, annual since 1957, which collects data from a representative sample of the U.S. population; and the more recent National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS), which survey physicians' offices, and hospital outpatient and emergency departments, respectively. These surveys show that persons aged between 65 and 74 years old made 725 visits per 100 persons to physicians' offices, hospital outpatient departments, and emergency rooms in 2005, or more than seven visits per person. Persons 75 years old and older made 865 visits per 100 persons. The most common reasons for office visits by the elderly were elevated blood pressure (7.7% of visits), cancer (6.3%), arthritis and related conditions (4.8%), and diabetes (4.5%; Cherry et al., 2007). Suggesting the importance of earlier life stages for health care use in later life, the first four reasons for the elderly were also the most common reasons among people aged between 50 and 64 years of age. Although data from the NAMCS and the National Health Interview Survey are not fully comparable, together they suggest that the elderly's use of outpatient physicians' care has been rising over time.

The National Health and Nutrition Examination Survey (NHANES) and the Medical Expenditure Panel Survey (MEPS, conducted by the Agency for Healthcare Quality and Research, 2002), both based on nationally representative samples, are two more surveys that provide information about the health care use of the elderly. The NHANES focuses primarily on health, not health care use, but asks about prescription drug use. Between 1988 and 1994, 73.6% of people 65 and older reported using at least one prescription drug in the last month; by 1999 to 2002, that figure had risen to 84.7%. Women were more likely than men to report prescription drug use: 88.1% versus 80.1% in the period from 1999 to 2002.

The periodic National Nursing Home Surveys collect information about residents of nursing homes, most of whom are elderly. Most residents, 74% in 2004, are women (National Center for Health Statistics 2007), in large part because women live longer than men, and so outlive their spouses and potential caretakers. Stable during the 1970s and 1980s, rates of nursing home use have declined since then: in 1985 there were 46 residents per

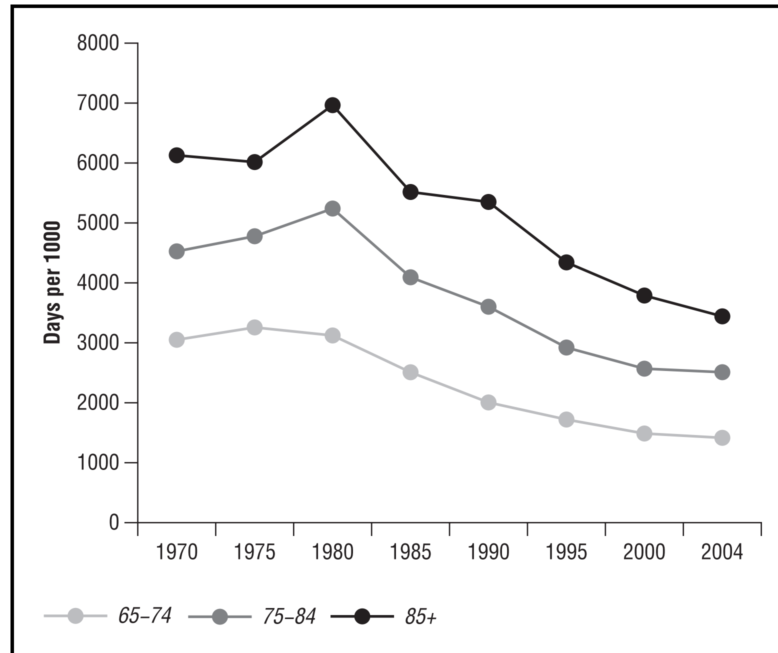



*Figure 2.* *Annual hospital days per 1,000 persons, by age.* CENGAGE LEARNING, GALE.

1,000 elderly; by 2004, 36 per 1,000. The decline has been particularly marked among those 75 and older, whose rates of nursing home use dropped by a third, from 58 to 36 per 1,000 people for those aged between 75 and 84, and from 220 to 139 per 1,000 people for those 85 and older. The decline is due to a combination of factors, including reduced levels of disability among the elderly (see later discussion in this entry) and the growing range of alternatives to nursing homes discussed earlier in this entry.

## EFFECT OF LIFE COURSE ON HEALTH CARE USE IN LATER LIFE

Use of health care services in later life is determined in large part by the culmination of circumstances and experiences earlier in the life course: genetic endowment and health at birth; socioeconomic advantage or disadvantage, including access to medical care; and the cultural context that shapes personal health habits and the levels and types of health resources available.

A fundamental aspect of good health, and determinant of the need for care, is the ability to function well physically and mentally. Data from the National Health Interview Survey show that, over the period from 1982 to 2002, disability measured by ADLs declined among persons 70 and older, and disability measured by IADLs declined even more (Schoen, Martin, Andreski, & Freedman, 2005). The improvement was not evenly distributed: Differences by race persisted throughout the period, with non-Whites experiencing more disability and differences by education and income widened. ADL limitations actually increased among older adults with an elementary school education, and those in the lowest income group, at the same time that they declined among those with more education and income.

The influence of the earlier life course on health care use in old age is starkly apparent in a comparison of Medicare beneficiaries who were uninsured before age 65 with those who had had private insurance (McWilliams, Meara, Zaslavsky, & Ayanian, 2007b). The comparison is based on the Health and Retirement Study, a longitudinal study supported by the National Institute on Aging that began documenting the lives of its participants in the early 1990s. Before age 65, uninsured adults with cardiovascular disease or diabetes had fewer doctors' visits and hospitalizations than insured adults with the same conditions. After age 65, when enrollment in Medicare gave them better access to care, they had substantially more visits and hospitalizations than previously insured persons. The greater use of services led to better health, although it did not compensate fully for the earlier lack of care (McWilliams, Meara, Zaslavsky, & Ayanian, 2007a).

Health care use and expenditures are commonly highest in the last year of life. Numerous studies have documented that more than 25% of total health care

expenditure for the elderly is devoted to caring for the 5% who die each year (Rice & Fineman, 2004). Because attempts to prolong life are typically less aggressive for the oldest old, however, end-of-life health care spending declines at older ages, mainly due to less use of inpatient hospital care, and is lower for those aged between 75 and 84 years old than those 65 to 74, and lower again for those 85 and older (Levinsky, Yu, Ash, Moskowitz, Gazelle, Saynina, & Emmanuel, 2001).

## RACIAL DISPARITIES IN HEALTH CARE USE

The impact of race on health care use has been a particularly active area for research in the last two decades. The *Report of the Secretary's Task Force on Black and Minority Health*, published by the Department of Health and Human Services in 1985, presented authoritative documentation that Blacks received fewer health care services, of lower quality, than Whites. In the intervening years, hundreds of studies have documented these disparities in more detail. The Institute of Medicine summarized the findings in *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (Smedley, Stith, & Nelson, 2003). Defining disparities as differences in care unrelated to clinical needs, preferences, or availability of care, the report found that:

> A large body of published research reveals that racial and ethnic minorities experience a lower quality of health services, and are less likely to receive even routine medical procedures than are white Americans.... Significantly, these differences are associated with greater mortality among African-American patients.

Because of the higher use of health care by the elderly, and the greater availability of good data, important studies have focused on racial disparities in later life. In 2005, *The New England Journal of Medicine* published three articles, based on data for millions of Medicare enrollees, showing that, despite the attention drawn to the problem, racial disparities in the use of major surgical procedures and in procedures for the management of heart attack had not improved over the decade of the 1990s (Jha, Fisher, Li, Orav, & Epstein, 2005; Vaccarino, Rathore, Wenger, Frederick, Abramson, Barron, et al., 2005). By contrast, differences in preventive care provided through managed care plans did decline (Trivedi, Zaslavsky, Schneider, & Ayanian, 2005).

Since 2003, the Agency for Healthcare Quality and Research has published the annual *National Healthcare Disparities Report* (Agency for Healthcare Quality and Research, 2005). The report compiles current information about differences in the use of services, and their quality, by racial/ethnic group, education, and income, and for special populations such as children, women, the elderly, residents of rural areas, and those with special health care needs. Not all disparities are to the disadvantage of the group: for example, women receive more preventive services than men. Summary tables at the end of each chapter detail racial/socioeconomic differences in receipt and quality of services.

## SOCIOLOGICAL THEORY AND FUTURE RESEARCH

Sociological theory recognizes that the link between illness and use of health care—the *help-seeking process*—is not a straightforward matter of biological need, but is shaped by an individual's symptoms, personality, cultural background, and experiences with the health care system (Cockerham, 2001; Mechanic, 1982). Symptoms that send one person to the doctor are ignored by another, people with the same symptoms and the same willingness to seek help can have quite different experiences in the health care system, and use of health services can serve purposes other than the maintenance of health, for example, providing people with reassurance or reason to put aside other obligations. Experience throughout the life course influences health and health care use in later life. Not only health but health habits are set starting in childhood, and shape health in adulthood. Researchers have found that the characteristics of an individual's prenatal and infant experience are associated with development of chronic diseases many years later. As Kuh and Ben-Shlomo put it (1997): "...throughout the life course exposures or insults gradually accumulate through episodes of illness, adverse environmental conditions and behaviours increasing the risk of chronic disease and mortality."

The most widely used sociological model of health care use organizes these contributing factors into three groups (Andersen, Kravits, & Anderson, 1975). *Predisposing factors* encompass demographic characteristics, such as age and gender, and personal disposition to seek care, which is influenced by upbringing and cultural background. *Enabling factors* refer to income, health insurance, the availability of health facilities and the attitude toward the patient of those who work in them, as well as other factors that make it easy, or difficult, to get care. *Need* originates with a physical or mental condition, but includes the way an individual has learned to interpret and respond to symptoms.

The statistics presented in this entry testify to the centrality of good data to research on health care use in later life. The theory just outlined suggests that, because help-seeking behavior is learned over the life course, and can change with an individual's experiences and circumstances, the most effective way to study it may be to study populations over a period of time, those who do and do not seek care, to identify the important and malleable

factors that contribute to decisions to seek care. As essential as good national statistics are, often the only way to learn more about differences in health care use, and the reasons for them, is to study the process as it unfolds in individuals' lives (Mechanic, 1982). Important areas for further research include the processes that lead to successful aging (Rowe & Kahn, 1998), the time and energy devoted to those processes by the elderly and by their friends and family (Russell, Ibuka, & Abraham, 2007), and the conditions conducive to ending the life course with what is recognized, personally and culturally, as a good death (Carr & Khodyakov, 2007). Research in these areas would contribute to making life after 65 not only an increasingly common experience, but also an increasingly satisfying one.

SEE ALSO Volume 2: *Policy, Health;* Volume 3: *Cancer, Adulthood and Later Life; Cardiovascular Disease; Chronic Illness, Adulthood and Later Life; Diabetes, Adulthood and Later Life; End of Life Decision-Making; Health Differentials/Disparities, Later Life; Hospice and Palliative Care; Long-term Care; Policy, Later Life Well-Being.*

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# HEALTH DIFFERENTIALS/ DISPARITIES, LATER LIFE

This entry provides a general overview of health disparities occurring in later life, among persons 65 years of age and older. By definition, health disparities are differences in health status among subgroups of the population. They typically refer to the higher rates of disease and mortality experienced by racial and ethnic minorities, and the economically disadvantaged. The World Health Organization (WHO) views health disparities as unjust when they represent conditions that are preventable and avoidable, and which result from inequities in social and economic resources. This entry focuses primarily on health disparities among older African Americans and describes the factors contributing to the health conditions they disproportionately face. The entry reviews data on the major health disparities and the explanations used to understand health disparities, and discusses strategies and interventions used to reduce these health differentials.

## HEALTH DISPARITIES AMONG OLDER MINORITIES

While the overall population of persons 65 and older is growing, the expanding numbers of older minorities comprise a significant segment. According to 2006 U.S. Census data, persons 65 and older numbered 37.3 million with older African Americans comprising 8.3% of this population in the United States, older Hispanics comprising 6.4%, and older Asian Pacific Islanders comprising 3.1%. Less than 1% of older adults were Native Alaskan or American Indian in 2006 (Administration on Aging, 2007a). By the year 2050, it is projected that the older African-American population will increase to 12% of those 65 and older, while older Hispanics will account for 18% and Asians 8% of the elderly population (Federal Interagency Forum, 2008). Contributing to this increase in the older minority population are the higher minority birth rates coupled with improved survival, immigration, the aging population of minority baby boomers, and a substantial increase in the numbers of the oldest old (e.g., those who are 85 years of age and older).

Life expectancy has increased for older racial and ethnic minorities throughout the 20th century. Nonetheless, older Whites can expect to live longer than other racial and ethnic groups. Life expectancy at birth is 68.2 years for African-American men and 74.9 years for African-American women (Arias, 2002). In contrast, older Whites have greater life expectancy at birth: 74.8 years for males and 80.0 years for females. The lower life expectancy at birth is due to the higher rates of infant mortality among African Americans as well as elevated mortality risks during the teen and young adult years, especially for Black men. However, for African Americans surviving to age 65, the gap in life expectancy narrows. At age 65, African-American men and women can expect to live another 15.2 and 18.6 years, respectively (Administration on Aging, 2007a). At age 85 and beyond, the racial gap in life expectancy disappears; older African Americans at this point may have a similar or better life expectancy than older Whites. This mortality crossover at the oldest ages is well-documented (Arias, 2002). Some researchers contend that the racial crossover in mortality results from inaccuracies in data, such as a tendency of older Blacks to overstate their age on surveys (Preston et al., 1996). Conversely, others posit that it reflects the *survival of the fittest* doctrine—that those individuals who withstand early life adversities, such as socioeconomic disadvantage and the threats of illness and crime victimization, yet who still survive until age 65, may be particularly robust and thus survive until very late life (Johnson, 2000).

Race and class disparities are not only apparent in life expectancy data; similar disparities are documented for many chronic health conditions. For example, the proportion of persons diagnosed with hypertension among older African Americans was 68.4% in 2002 and 2003 compared to 45.0% for Hispanics and 49.7% for Whites. Arthritis also had the highest prevalence among older African Americans (53.4%), followed by Whites (48.4%) and Hispanics (42.6%). Diabetes was highest among African Americans (24.5%) and Hispanics (21.9%) and lowest for Whites (14.9%). Similarly, stroke prevalence was highest for African Americans (9.6%) and lower for Whites (8.6%) and Hispanics (8.0%). Cancer and heart disease each have higher prevalence among older Whites, but the mortality risk for these conditions is greater for older racial and ethnic minorities. Specifically with regard to leading causes of death, rates for older African Americans and Hispanics exceed those of Whites for heart disease (32.0%, 32.4%, 31.8%, respectively), cancer (22.7%, 21.0%, 21.5%, respectively), stroke (8.3%, 7.4%, 7.9%, respectively), and diabetes (5.0%, 6.3%, 2.4%, respectively) (Centers for Disease Control, 2007). The rates of HIV and AIDS among persons 50 years and older were also higher among racial and ethnic minorities than Whites. In addition, many older racial and ethnic minorities have more chronic health conditions compared to Whites.

Other health indicators provide additional evidence of health disparities faced by older minorities, and underscore the ways that health disparities affect the daily lives of older adults. Physically unhealthy days is an indicator of the number of days in the past month where poor physical health kept an individual from doing usual activities, performing basic self-care tasks, working, or

participating in recreational activities. According to the Behavioral Risk Factor Survey, the number of physically unhealthy days in the past month averaged 6.8 for older African Americans and 6.6 for Hispanics, compared to 5.5 for Whites (Centers for Disease Control, 2007). In addition, older African Americans are more likely than Whites to have disabilities, and the proportion reporting such disabilities increase with increasing age and with decreasing socioeconomic status. Data also indicate that 11.1% of African Americans needed help from others with personal care in comparison to 5.3% for Whites and 8.1% for Hispanics (National Center for Health Statistics, 2007a).

## EXPLAINING HEALTH DISPARITIES CAUSES AND CONTRIBUTING FACTORS

While biological and genetic factors may influence predisposition to disease and mortality, definitive scientific knowledge is lacking on how social and physical environment interface with biology to produce health disparities. Contemporary approaches for understanding health disparities tend to focus on the broader historical, socioeconomic, and cultural factors. John Capitman and associates (2005) contend that these factors both determine the complex and interrelated meanings of social location (race or ethnicity, gender, social class, region, and community) and shape the resources and environments that influence health. For older minorities, health disparities stem from their social location as a minority group, which in turn influences the socioeconomic resources available to them, the social and physical environments in which they live, the health behaviors in which they engage, and their access to quality health care for prevention and treatment of illness and disease. A life course perspective underscores the importance of understanding how circumstances occurring earlier in life have a cumulative impact on health status later in life. Specifically, the major factors contributing to health disparities are cumulative lifetime and current availability of social and economic resources needed for maintaining good health in American society; exposure to toxic physical and social environments; tobacco and alcohol use, eating habits, and amount of physical activity; and access to quality medical care.

## SOCIAL AND ECONOMIC RESOURCES

Numerous studies have documented the important relationship between socioeconomic status and health, with lower socioeconomic status contributing to poorer health outcomes. Socioeconomic status is typically measured by income and wealth, education, and occupation, and is

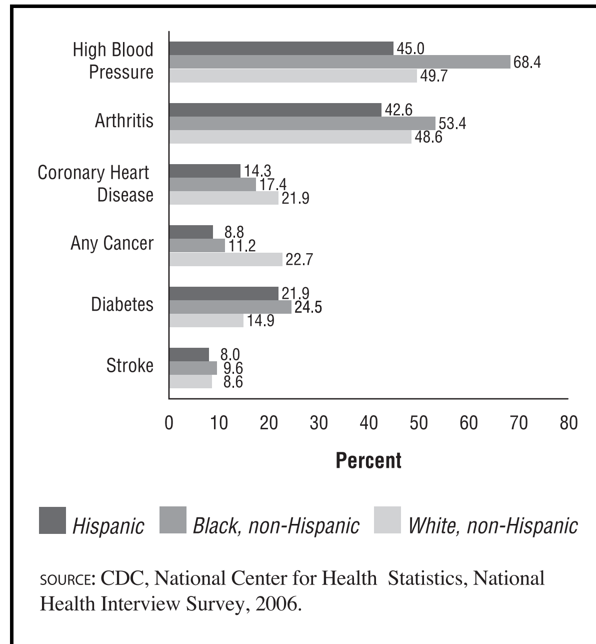


***Figure 1.*** *Prevalence of chronic conditions among adults aged 65 years or older varied by race/ethnicity in 2002–2003.* CENGAGE LEARNING, GALE.

associated with the availability of resources to meet one's daily needs and desires. Lower socioeconomic status increases vulnerability to health risks such as exposure to poor housing and toxic environments, inability to pay for health costs, and lack of knowledge of health resources and health-promoting behaviors. For older racial and ethnic minorities, historical and current patterns of racial and ethnic discrimination have resulted in reduced availability of social and economic resources later in life (Capitman et al., 2005).

As a measure of socioeconomic status, educational attainment among older minorities has increased significantly over the past 4 decades in response to federal and state legislation, as well as local policies and programs that have expanded educational opportunities. Nonetheless, the level of educational attainment levels of older minorities lag behind that of older Whites. Data from 2007 show that 58% of older African Americans and 42% of older Hispanics had finished high school compared to 81% of older Whites (Federal Interagency Forum, 2008). Moreover, 10% of older African Americans and 9% of older Hispanics in 2007 had earned a bachelor's degree or higher, compared to 21% of older Whites (Federal Interagency Forum, 2008). Labor force participation rates do not vary significantly by race and ethnicity among those 65 and older; in 2003 17.0% of African-American men, 18.7 % of White men, and 17.4% of Hispanic men in this age group were in the

labor force. Similarly among women 65 and older, rates of labor force participation in 2003 were 10.3% for African Americans, 10.8% for Whites, and 9.4% for Hispanics (He et al., 2005). These data, however, do not reveal racial or ethnic differences in the type or quality of jobs that adults held during their working lives. The data also fail to capture the numbers of older persons who continue to work in household, child care, and other low-wage service jobs that racial and ethnic minorities are apt to hold.

Among all older persons heading households in 2006, Whites had a median income of $41,091, compared to $30,775 for African Americans, $43,035 for Asians, and $29,385 for Hispanics (Administration on Aging, 2007a). Older African Americans (23%) and Hispanics (19%) were more likely than older Whites (8%) to live in poverty, with poverty circumstances varying by gender (Federal Interagency Forum, 2008). In particular, older African-American women were more likely to live in poverty than African-American men, with poverty being more severe for those living alone. Significant racial gaps exist in household net worth encompassing not only income, but also real estate, stocks, bonds, and other assets exclusive of debt. The median household net worth in 2005 for older Whites ($226,900) was more than 6 times that of older African Americans ($37,800). The largest share of income for African Americans 65 and older tends to come from Social Security benefits, which provides income to 82.6% of African Americans in this age group (Wu, 2007).

## PHYSICAL AND SOCIAL ENVIRONMENTS

Where one lives and with whom one lives are additional factors associated with health disparities. Research shows that life expectancy varies by community of residence and the degree of racial concentration. Christopher Murray and colleagues (2006) found that in communities where African Americans comprise the majority population, life expectancy was lower than in communities where the population was largely White. Additional research has examined the association between neighborhoods and health status. Specifically, residing in neighborhoods with few social and economic resources along with exposure to poor housing, crime, and violence contributes to the self-reported health differentials between older African Americans and Whites. Residing in a more affluent neighborhood contributes positively to self-rated health, even after adjusting for one's personal economic resources (Cagney et al., 2005).

Household living arrangements vary by gender and have ramifications for health status in terms of availability of economic resources and social support. Reflecting the gender gap in longevity, 52% of older African-American men in 2006 were most likely to live with their spouse, 18% with other relatives, 4% with nonrelatives, while 26% were most likely to live alone. In comparison, among African-American women, only 23% lived with their spouse, 34% with other relatives, 2% with nonrelatives, while 42% lived alone (Administration on Aging, 2007b). These gender differences in living arrangements result from women's greater likelihood of becoming widowed. They also reflect older men's higher mortality risk and their greater likelihood of remarrying once they are widowed. A multicultural survey of older persons indicated that older African Americans are more likely than other older subgroups to live in multigenerational households and to say that they will care for their grandchildren or aging parents (American Association of Retired Persons, 2001). While living in multigenerational households may bring the advantages of shared resources and social support, such arrangements across the life course may also diminish one's health status through the stress associated with limited financial resources and family caregiving.

Poorer health status among older African Americans, as compared to older Whites, may also be linked to differences in marital status. Among persons 65 and older, African Americans are the least likely to be married because of the lower numbers of marriageable men resulting from high rates of mortality, incarceration, and lower incomes. Marriage provides a protective effect on health, because spouses (particularly wives) monitor each other's health behaviors, such as diet and medication compliance. As such, married people have lower mortality rates than unmarried people at all ages, and the survival advantage of marriage is larger for men. Among persons ages 65 to 74, the death rate per 100,000 for never-married people was 4,029.6, compared with 2,351.4 for ever-married people. Further, among people who had ever married, death rates of currently married people were lower than the rates for the divorced or widowed (He et al., 2005).

## MODIFIABLE HEALTH RISK BEHAVIORS

Health behaviors contribute significantly to poor health outcomes, and a lifetime of poor health behaviors increases risk for disease and a shorter life expectancy. A particular health threat to African-American women is obesity, which increases one's risk for a range of diseases including type 2 diabetes, hypertension, heart disease and stroke, and some cancers. Among White women 20 years and older, 58.7% were overweight, which includes those who were obese, in comparison to 79.1% of African-American women and 71.4% of Mexican-American women. Among men however, African Americans are

the least overweight (66.3%), followed by White men (71.6%) and Mexican-American men (71.8%) (National Center for Health Statistics, 2007b). Maintaining a healthy body weight is related to physical activity and balanced nutrition. Data show that a lower proportion of African Americans (21.2%) and Hispanics (20.0%) engage in regular leisure time activity, relative to Whites (31.6%) (National Center for Health Statistics, 2007b). Additional data indicate that older African Americans (25%) and older Hispanics (26%) are also less likely than their White (31%) counterparts to eat the recommended five or more servings of fruits and vegetables daily (Centers for Disease Control, 2007). Healthy eating and physical fitness practices may reflect cultural and personal preferences as well as reduced access to high-quality, affordable foods and safe spaces for recreation and physical activity in many minority neighborhoods.

## DIFFERENTIAL ACCESS AND QUALITY OF HEALTH CARE

The disparities in health status found among older racial and ethnic minorities reflect, in part, differential access and quality of health care throughout their life span. These health care disparities are troubling given that older persons are eligible for health care coverage through the government-sponsored Medicare program. In 2006, the majority (94%) of persons 65 and older were covered by Medicare (Agency for Health Care Research and Quality, 2008). Despite Medicare coverage, access and utilization of health care systems are also shaped by geographical proximity to health care facilities and having access to transportation. Further, in many instances, Medicare-covered health services require co-pays for care and prescription medication. Research shows that elderly racial and ethnic minorities are more likely to delay receiving health care assistance because of these direct and indirect costs, even though they were covered by Medicare (Agency for Health Care Research and Quality, 2008).

Health disparities in later life also stem from the poorer quality of care received by racial and ethnic minorities, as documented in the 2003 landmark report, *Unequal Treatment*, for the Institute of Medicine by Brian Smedley and colleagues. Additional research by Jose Escarce and Thomas McGuire (2004) found that White Medicare beneficiaries were twice as likely as African Americans to receive coronary artery bypass surgery and were about twice as likely to receive nonsurgical revascularization. In another study, Dorothy Dunlop and colleagues (2008) documented lower rates of arthritis-related hip and knee surgeries among older African Americans, while Douglas Keith and colleagues (2008) found that older minorities and those with low education had less access to kidney transplantation Other studies have noted differential quality of health care associated with hospitals and the racial characteristics of their patients. Hospitals with high volumes of elderly African-American patients provided poorer quality care for patients with acute myocardial infarction and pneumonia and had a higher rate of mortality after heart attacks than did hospitals with predominantly older White patients (Jha et al., 2007).

The underlying reasons for the differences in health care quality for older minorities in America are not completely understood, although racial discrimination by health care providers is cited as one possible explanation. In other instances, health care providers in hospitals serving predominantly minority populations are less likely to be board certified and may lack the resources, equipment, and technology necessary for provision of quality care.

Utilization of available health care by older racial and ethnic minorities is also apt to be influenced by cultural factors as well as past experiences of discrimination in the health care system. Older African Americans, in particular, are apt to be familiar with the historical patterns of racial segregation and discrimination that affected all sectors of society, including health care, and in many instances continue to do so. Nancy Keating and associates (2004) note that African Americans are less likely to report confidence and trust in their specialty physician than Whites. In examining health services utilization among older African Americans, Ronica Rooks and Diane Brown (2008) found that older African Americans were less likely than their White counterparts to express trust in hospitals or in heath care professionals, and were less likely to believe that African Americans receive the same quality of care as Whites.

## CLOSING THE HEALTH STATUS GAP

The four major categories of factors contributing to health disparities described above also give rise to opportunities for reducing and ultimately eliminating health disparities experienced by older racial and ethnic minorities. Efforts target modifiable health behaviors such as improving nutrition, increasing physical activity, and reducing cigarette smoking. Other efforts focus on improving health literacy among older persons, motivating them to take part in regular screenings and health-promotion activities, assisting them with disease management, and encouraging their participation in clinical research. Barriers to accessing quality health care are addressed through programs that offer transportation, reduce the costs of prescription drugs, coordinate patient navigation, provide cultural competence in health care settings, and increase racial and ethnic diversity in the health professions workforce. Additional programs aim to reduce the impact of poor housing and toxic

neighborhood environments on health in later life. However, while many of these efforts have been successful in their specific settings, widespread adoption and sustainability are lacking. Efforts are needed to reach racial and ethnic minorities with the necessary resources early in life to develop and maintain good health, so that health disparities do not evolve later in life. Most important, a national agenda is needed to address the broader social and economic issues that are largely responsible for health disparities occurring across the life span.

**SEE ALSO** Volume 3: *Genetic Influences, Later Life; Health Care Use, Later Life; Life Expectancy; Neighborhood Context, Later Life; Poverty, Later Life.*

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***Diane R. Brown***

# HEALTH LITERACY

Health literacy is critical for understanding the challenges facing older adults' ability to navigate the health care system and is increasingly important as health care systems place greater responsibility on patients to manage their own health care. Health literacy measures help identify patients at risk for inadequate health care and

guide development of interventions to improve their outcomes. Thus they are essential for understanding and addressing disparities in health care resource utilization and outcomes associated with age and other demographic variables.

Health literacy has been conceptualized in several ways. A common definition focuses on individuals' abilities: "the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (U.S. Department of Health and Human Services, 2000). These abilities include skills required to read text, interpret complex documents such as insurance forms, and understand and manipulate numbers (often referred to as *numeracy*). Health knowledge relevant to understanding health information is sometimes included in the definition of health literacy (Baker, 2006). Health literacy is also closely linked with education, in part because core literacy skills are systematically imparted during schooling. However, there is general agreement that health literacy is not reducible to educational attainment, especially for older adults because of their many years of literacy-related experiences after formal schooling (Baker et al., 2007). Health literacy is also related to more general cognitive abilities such as working memory, in part because language comprehension processes (e.g., word recognition, drawing inferences) depend heavily on these abilities. The finding that performance on standard health literacy measures is predicted by performance on general cognitive measures (Levinthal et al., in press) provides evidence for this assertion.

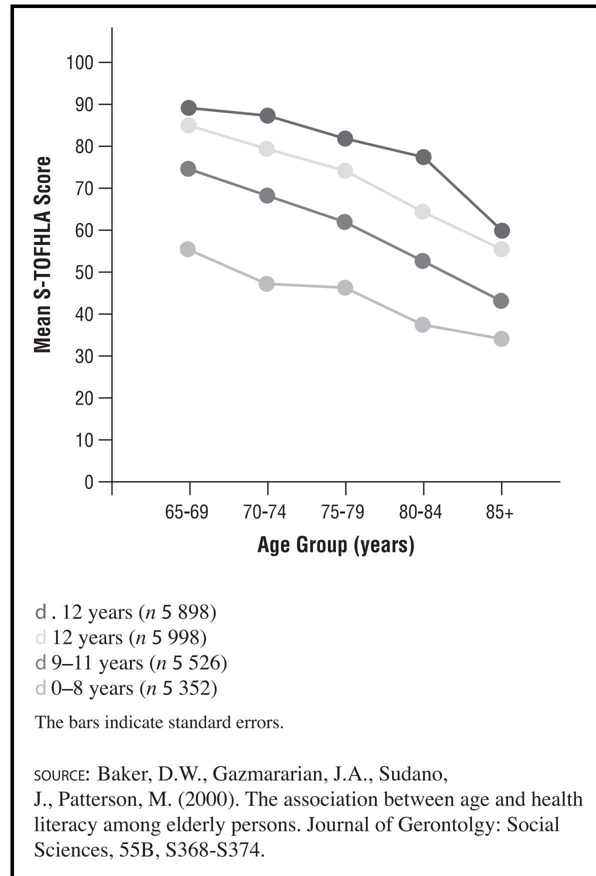


***Figure 1.*** *Mean scores on the Short Test of Functional Health Literacy in Adults for five age groups, stratified according to years of school completed.* CENGAGE LEARNING, GALE.

Health literacy has also been defined functionally, as the relationship between an individual's abilities on the one hand and the demands placed on these abilities by specific health care contexts on the other (Nielsen-Bohlman, Panzer, & Kindig, 2004). According to this view, even highly skilled readers may experience low health literacy when confronted with complex or unfamiliar health tasks. Functional approaches often take a broader view of the resources that individuals bring to health care tasks, including community-level factors such as social networks (Nielsen-Bohlman et al., 2004).

Although health literacy is conceptualized in different ways, measures of health literacy focus on individual-level abilities, perhaps because these relatively stable abilities are easier to measure than dynamic functional relationships between abilities and context (Baker, 2006). Perhaps most common is the Rapid Estimate of Adult Literacy in Medicine (REALM), which measures the ability to pronounce medically related words varying in complexity (Davis et al., 1993). Performance on this test is assumed to be a proxy for a larger set of comprehension and reasoning processes that define health literacy. The Test of Functional Health Literacy in Adults (TOFHLA; Baker, Williams, Parker, Gazmararian, & Nurss, 1999) is more directly related to health literacy abilities because it measures comprehension of actual health documents (by means of a cloze procedure, which involves filling in missing words in the texts). Other approaches take a more comprehensive approach to measuring literacy skills. The Health Activities Literacy Scale, based on the National Adult Literacy Survey, sampled a wide range of texts that serve a variety of purposes (health promotion, prevention, treatment) and ordered them in terms of processing difficulty to be broadly representative of health literacy demands (Rudd, 2007). Other measures are designed for practical rather than research purposes, such as identifying patients with inadequate literacy in clinical contexts. The Newest Vital Sign is a brief assessment of how well patients understand a nutrition label that focuses on numeracy skills. It functions well as a screening instrument but is less likely to predict health outcomes compared to the Short Test of Functional Health Literacy in Adults (STOFHLA; see Baker, 2006).

Estimates based on these measures suggest that about half of the U.S. population has less than adequate health-related literacy (difficulty finding, understanding, or reasoning about basic health information). The proportion of adults with less than adequate health literacy increases with age and is higher for African American and Hispanic middle-age and older adults compared to non-Hispanic White or Asian adults (Paasche-Orlow et al., 2005). These differences may partly reflect differences in health status (e.g., African American adults are more likely than White Americans to have some chronic conditions), as well as differences in the amount or quality of educational attainment. Age-related differences in health literacy also reflect age-related differences in general cognitive abilities, which may impair comprehension processes (Levnithal et al., in press). Finally, elderly immigrants may face special challenges related to health literacy because of limited English proficiency and perhaps limited education in their native language.

Differences in health literacy are associated with health-related knowledge, self-care behaviors, and health outcomes, especially among older adults. Older adults with lower health literacy know less about their illness and treatments (Gazmararian, Williams, Peel, & Baker, 2003), which may partly reflect poor comprehension of health information conveyed by documents such as medication instructions (Davis et al., 2006) and health care providers (Schillinger et al., 2003). They also tend to be less successful at taking medication (Gazmararian et al., 2006), and, perhaps not surprisingly, they tend to have worse health outcomes such as increased hospitalization (for review, see DeWalt et al., 2004) and even mortality (Baker, 2007).

There is great interest in improving health behaviors and outcomes among older adults with low health literacy. This goal requires understanding why older adults have trouble navigating the health care system. Perhaps the most common approach has been to simplify health information provided to patients with low health literacy in order to address the well-documented gap between the difficulty of health documents (e.g., medication instructions, consent forms) and patients' average reading skills (McCray, 2005). Difficulty is usually measured by readability formulae that summarize word and sentence length, and sometimes word frequency, so this strategy usually involves using short, common words. However, improving document readability has had only limited success in improving comprehension among low-literacy adults, perhaps because this strategy does not address dimensions of text such as information organization and familiarity that are known to influence comprehension (McCray, 2005).

Pictorials and other visual-graphic media are also used to support comprehension (usually augmenting text) because they reduce the need for reading processes such as recognizing words. If more explicit than text, pictures also reduce the need to draw inferences to understand the text. However, the evidence for pictorial benefits among older adults with low health literacy is mixed (Houts, Doak, Doak, & Loscalzo, 2006).

The studies on improving health documents suggests the need for research that is guided by theories that integrate health literacy with theories of language comprehension and cognitive aging to identify what comprehension processes are impaired among older adults with low health literacy and how interventions can support these processes.

Communication between health care providers and their patients with low health literacy has also been addressed to improve provider/patient concordance (agreement) about self-care goals and plans for accomplishing these goals. "Teachback" strategies, such as asking patients to demonstrate their understanding so that providers can check comprehension, have been proposed as an important method of improving patient comprehension. Routine use of these strategies has been recommended as a "universal precaution" because they may improve comprehension regardless of patients' literacy level, coupled with the fact that it is difficult to identify patients with low health literacy during clinical encounters (Paasche-Orlow, Schillinger, Greene, & Wagner, 2006). However, effects of these strategies on patient comprehension and outcomes have not been systematically investigated.

Multimedia approaches to improving both written and spoken communication to patients have been included as part of multifaceted patient education interventions to improve health behaviors and outcomes among diverse patients (Murray et al., 2007). These approaches have had some success in improving health outcomes for patients with lower health literacy skills, perhaps because multifaceted interventions address multiple dimensions of health literacy.

Information technology such as electronic medical records and web-based health services also has the potential to address multiple health literacy-related barriers to health care. Health information is increasingly available on public web sites and on portals provided by specific health care practices. Unfortunately, Internet-based information may be just as difficult to understand as printed sources of information because average readability often exceeds recommended grade levels (McCray, 2005). Information technology can also facilitate patients' access to tailored information, as well as support patient/provider communication by addressing barriers such as limited patient contact time. However, the impact of these systems on diverse patients is underinvestigated. In addition, because

technology has been less accessible to patients from low socioeconomic backgrounds who are at risk for poor health literacy, it may increase disparities in health care associated with health literacy (McCray, 2005).

Finally, patients' literacy-related skills may be improved by adapting principles from adult literacy education, rather than designing environments to reduce demands on these skills (Nielson-Bohlman et al., 2004). Literacy training may provide more general benefits compared with design-based interventions to the extent that they improve literacy skills that patients can use across a variety of contexts. However, training programs are intensive and target relatively small groups of patients, whereas redesigned health information and services can be made available to many patients.

To summarize, health literacy has been conceptualized both as a set of individual abilities necessary to understand and use health-related information and more functionally as the relationship between patients' abilities and the demands on these abilities imposed by specific health contexts. The most common measures of health literacy focus on individual abilities, essentially measuring reading ability. Studies employing these measures have documented inadequate health literacy as a pervasive problem that is linked to a variety of important patient health behaviors and outcomes. There is a need for health literacy theories that are both more precise (specifying comprehension processes and how these depend on patient cognition and health knowledge) and more comprehensive (integrating community- as well as individual-level analyses of patient resources). Such theories will help specify pathways by which health literacy is linked to health behaviors and outcomes and guide more integrated approaches to improving health literacy among older adults. Particularly promising are community-based interventions that leverage health information technology to improve access to information and services.

**SEE ALSO** Volume 3: *Cognitive Function and Decline; Health Care Use, Later Life.*

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# HEARING LOSS

**SEE** Volume 3: *Sensory Impairments.*

## HOMELESS, LATER LIFE

**SEE** Volume 2: *Homeless, Adults.*

## HOSPICE AND PALLIATIVE CARE

Hospice and palliative care improves the quality of life of patients and their families who are affected by life-threatening illness by preventing and relieving suffering through pain and symptom relief, as well as by providing emotional, practical, and spiritual support.

### A BRIEF HISTORY OF THE MODERN HOSPICE AND PALLIATIVE CARE MOVEMENT

The modern hospice and palliative care movement can be traced back to Dame Cicely Saunders (1918–2005), who founded St. Christopher's Hospice in London in 1967. She was a nurse, who later trained as a social worker and eventually became a physician. Saunders began working with terminally ill patients in the 1940s and decided to make it her life's work to develop a better model of care for these individuals. In 1963 Saunders was invited to speak at Yale University, where she introduced the idea of holistic hospice care to a group of students and faculty. This new approach to end-of-life care focused on pain and symptom control for terminally ill patients. Using photographs, Saunders demonstrated the dramatic differences that she and her team were seeing in patients who were receiving hospice care. Following the presentation, Florence Wald (b. 1917), the dean of the Yale School of Nursing, invited Saunders to become a visiting faculty member at Yale—an invitation Saunders gladly accepted. Then, in 1968, Wald took a sabbatical to work at St. Christopher's Hospice and to gain firsthand experience with Saunders's new and innovative model of care.

In 1974 the Connecticut Hospice, the first hospice in the United States, was founded, followed shortly thereafter by an inpatient facility at Yale Medical Center. By the late 1970s hospice programs were being tested across the country in order to determine exactly what a hospice should be and what type of care it should provide. The first legislation establishing the Medicare hospice benefit, which allowed Medicare patients to choose hospice care in lieu of curative treatments if they had a prognosis of less than 6 months to live, was passed by the U.S. Congress in 1982 and made permanent in 1986. In the early 21st century, most states provide hospice care as part of their Medicaid programs, which was the catalyst for the significant growth in the number of hospices around the country. It was also during this time that hospices transitioned from grassroots, volunteer-based organizations into the more traditional health care model that is used today. In 2008 there were more than 4,500 hospices nationwide, including some that are part of larger health care systems and others that are independent, as well as both for-profit and nonprofit hospices. In addition, hospices service a variety of illnesses, are found in both large and small communities, and continue to strive to provide the best possible end-of-life care for terminally ill patients and their families.

### HOSPICE CARE AND PALLIATIVE CARE: WHAT THEY ARE AND WHY THEY ARE IMPORTANT

The National Hospice and Palliative Care Organization (NHPCO), which was originally the National Hospice Organization, was founded in 1978. The NHPCO is the largest nonprofit membership organization in the United States, representing both hospice and palliative care professionals and programs. This organization is dedicated to improving end-of-life care and increasing access to hospice care for all individuals, with the ultimate goal of dramatically improving quality of life for both the dying patient and his or her family caregivers. Because hospice care is truly a set of principles, rather than a simple construct, it can be rather difficult to define; however, author Stephen Connor (1998) offered this definition based on the work done by the NHPCO:

> [Hospice care is] a coordinated program providing palliative care to terminally ill patients and supportive services to patients, their families, and significant others 24 hours a day, seven days a week. Comprehensive/case managed services based on physical, social, spiritual, and emotional needs are provided during the last stages of illness, during the dying process, and during bereavement by a medically directed interdisciplinary team consisting of patients/families, health care professionals and volunteers. Professional management and continuity of care is maintained across multiple settings including homes, hospitals, long term care, and residential settings. (p. 184)

*Palliative care*, as defined by the NHPCO, is as follows:

> [Palliative care is] treatment that enhances comfort and improves the quality of an individual's life during the last phase of life.... no specific therapy is excluded from consideration.... the test of palliative care lies in the agreement between the individual, physician(s), primary caregiver, and the hospice team that the expected outcome is relief from distressing symptoms, the easing of pain, and/or the enhancing of quality of life.

Notice that the term *palliative care* is included in the definition of hospice care. This is because hospice care is considered one type of palliative care—one with the specific focus of providing comfort and a better quality of life for individuals near the end of their lives for whom cure is no longer an option. In a sense, these two terms are interchangeable for patients at the end of their lives; however, palliative care can be instituted at an earlier phase of the illness. In general, to qualify for hospice care, a patient must be certified as having a prognosis of less than 6 months to live; however, patients can choose to begin palliative treatments prior to becoming eligible for hospice care. Once a patient has been enrolled in hospice care, Medicare covers the cost of all services provided by the hospice including, but not limited to, nursing visits, medications, and medical equipment. Hospices are reimbursed by Medicare at a set rate per day—$135.11 for routine home care in 2008—and the average length of stay nationally is approximately 59 days (NHPCO, 2007). However, it is important to note that the median length of stay for patients enrolled in hospice is approximately 21 days and that this measure is considered a more accurate picture of the average hospice experience for patients and their families (NHPCO, 2007). Some regional differences have been seen in median length of stay in hospice, with Louisiana, Mississippi, Alabama, South Carolina, North Carolina, and New Mexico reporting on average a 30- to 45-day length of stay (Last Acts, 2002). Both hospice care and palliative care share a common philosophy that includes the following principles (Last Acts, 2002):

1. Respect for the choices of the dying person.
2. Attention to all aspects of the dying person's life, including spiritual, emotional, physical, psychological, and social needs.
3. Providing support for the family members of the patient.
4. Provision of health care by an interdisciplinary team in all care settings.
5. Striving to provide the best possible care at the end of life.

One reason for the increase in attention to the topics of hospice and palliative care is because of the reality that most deaths in the United States do not actually occur in the way that most people report they would like them to. Approximately 50% of all Americans die in hospitals, with their deaths often preceded by stays in intensive care units and numerous physician visits, whereas another 20 to 25% of Americans die in nursing homes, a proportion that is currently on the rise (Last Acts, 2002). This leaves approximately 25% of Americans who die at home, despite that more than 70% say that their home, where they can be surrounded by friends and family, is their preferred location of death (Last Acts, 2002). Additionally, research has shown that hospice care may prolong the lives of terminally ill patients. In the sample for one study (Connor, Pyenson, Fitch, Spence, & Iwasaki, 2007), hospice patients survived, on average, 29 days longer than nonhospice patients. Out of the six disease categories that were studied, four showed significant increases in survival time (the two groups that did not differ were breast and prostate cancer patients): (a) for congestive heart failure patients, survival time increased by 81 days; (b) for lung cancer patients, 39 days; (c) for pancreatic cancer patients, 21 days; and (d) for colon cancer patients, 33 days.

## THE ROLE OF FAMILIES IN HOSPICE AND PALLIATIVE CARE

Although it is beyond the scope of this entry to examine in detail the role of family caregivers for patients who are receiving hospice and palliative care services, it does merit some attention, especially because they play a critical role in the decision regarding whether to utilize these services. In one study (Chen, Haley, Robinson, & Schonwetter, 2003), patients with advanced cancer were surveyed on decision making in regard to hospice care. Whereas half of these patients reported that they were first introduced to hospice as a treatment option by a health care provider (e.g., physicians, nurses, and social workers), a surprising 20% indicated that it was a family member who initiated the discussion. This study also found that when it comes to making the final decision to obtain hospice care, family members were reported to make this decision in more than 40% of cases. Not surprisingly, Chen and colleagues found that the characteristic that most influenced who aided the patient in making the final decision about whether to enter hospice was their marital status: Patients who were married were more likely to have their families make the decision, whereas patients who were widowed, divorced, separated, or single tended to make the final decision for themselves.

It is important to mention the impact that providing care at the end of life can have on family members. Ezekiel Emanuel and colleagues (Emanuel et al., 1999; Emanuel, Fairclough, Slutsman, & Emanuel, 2000) conducted national studies that documented the high levels of assistance provided by family caregivers of terminally ill patients and the burdens experienced by those families in the context of terminal illnesses. They showed that burden and depression are higher in family caregivers of patients with substantial care needs regardless of the specific terminal illness, as compared to family caregivers of patients with lower levels of care needs. Consistent

with this finding, another study (Haley, LaMonde, Han, Narramore, & Schonwetter, 2001) found that hospice caregivers for terminally ill patients with either lung cancer or dementia showed high rates of depression, lower life satisfaction, and poorer self-rated health than noncaregiving controls, with few differences in caregiver well-being across disease type. Haley and colleagues also found that many families report experiencing benefits from caregiving, such as a sense of satisfaction and feelings of closeness to their relatives.

One of the main tenets of hospice care is the continued support for the family caregivers provide after the death of the patient. The NHPCO (2007) reported that, on average, bereavement services are utilized by approximately two family members per hospice death. Additionally, in the year following the death of the patient, an average of seven contacts, including follow-up phone calls, visits, and mailings, are received by these family members. Roughly 94% of all hospices offer bereavement services to everyone in the community, regardless of whether their loved one used hospice services; community members who never had family enrolled into a hospice program accounted for approximately 17% of the individuals that utilize bereavement programs (NHPCO, 2007).

## TRENDS IN HOSPICE AND PALLIATIVE CARE

There are some promising trends in the utilization of hospice and palliative care services, including, but not limited to, increased enrollment, location of death, patient diversity, program growth, and cost-effectiveness. The NHPCO (2007) reported that, in 2006, approximately 1.3 million patients received hospice services, which is a significant increase (162%) from approximately 495,000 in 1997. Furthermore, approximately 36% of all individuals who died in the United States in 2006 were enrolled in a hospice program (NHPCO, 2007).

As previously noted, there is a gap between where Americans would like to die and where most deaths actually occur, at home versus at a hospital. In the general population, approximately 50% of deaths occur in a hospital setting (Last Acts, 2002); however, this number is significantly reduced to only about 9% for individuals enrolled in a hospice care program (NHPCO, 2007). Additionally, 74.1% of hospice patients died in a setting that they identified as *home* (47.1% in a private residence, 22.5% in a nursing home, and 4.6% in a residential facility; NHPCO, 2007), as compared to approximately 50% of the general population (Last Acts, 2002). The remaining 17% of hospice patient deaths occurred in inpatient hospice facilities, which are typically a combination of acute and residential care and can be located either in stand-alone facilities or within a dedicated hospital space (NHPCO, 2007).

***Hospice Care.*** *Ruth Sauer stands overlooking her husband, Merle, as longtime caregiver Brigitte Webb shares a laugh with him in the Sauer's home. When he came home from the hospital after several bouts of pneumonia for what doctors said would be the last time, hospice care came home with them.* AP IMAGES.

During the early days of the hospice movement in the United States, cancer patients accounted for the vast majority of hospice admissions, but in 2008 they made up only 44.1% of the hospice population (NHPCO, 2007). With the increase in deaths due to chronic illnesses in this country, the face of hospice care is beginning to change. In 2006 the primary diagnosis of all noncancer patients (55.9% of the total hospice population) under hospice care were heart disease (12.2%); debility unspecified or "failure to thrive" (11.8%); dementia, including Alzheimer's disease (10.0%); lung disease (7.7%); stroke or coma (3.4%); kidney disease (2.9%); motor neuron diseases (2.0%); liver disease (1.8%); HIV or AIDS (0.5%); and other diagnoses (3.7%; NHPCO, 2007). The inclusion of so many chronic illnesses into the hospice model of care has cleared the way for clinicians and researchers to examine

the unique challenges each illness presents and how palliative care treatment options can be introduced and implemented in an aging population.

In 2007 almost 80% of hospice patients were over the age of 65 and approximately 33% were age 85 or older; both numbers are expected to increase as the baby boom generation continues to age (NHPCO, 2007). One study (Connor, Elwert, Spence, & Christakis, 2007), using the data from all Medicare beneficiaries age 65 and older who died in 2002, provided some important information on current hospice utilization trends. This study found that women were more likely to enroll in hospice care than their male counterparts (30% compared to 27%), that individuals who identified themselves as White used hospice services more frequently than individuals who identified themselves as Black (29% compared to 22%), and that, overall, 28.6% of older Americans use hospice services in their last year of life.

Although the utilization of hospice services by minority populations is still relatively low, research has demonstrated a slight increase (19.1% of the hospice population in 2006 compared to 17.8% in 2005) in these numbers, particularly in individuals who identify themselves as African American or multiracial (NHPCO, 2007). Many people believe that the underutilization of hospice services by minorities, particularly African Americans, is due to the distrust of the medical system; however, there is evidence to suggest that the issue is far more complicated. Research has suggested that cultural attitudes and preferences for aggressive treatment at the end of life as well as a lack of education at all levels within minority communities about hospice services are both barriers to the utilization of hospice care.

Ever since the first hospice opened in the United States, there has been tremendous growth in the number of hospice programs nationwide. In 2006 there were approximately 4,500 hospice and palliative care programs in existence nationwide. This is an increase of about 50% between 1997 and 2006, with the majority of this growth seen in small, independent hospices (NHPCO, 2007). The increase in the number of hospice and palliative care organizations, coupled with findings that the use of hospice services simultaneously saves money for Medicare (an average of $2,309 per hospice patient) and provides quality care to terminally ill patients and their families, indicates that this relatively young health care model should remain the gold standard in end-of-life care as the American population continues to age.

## THE FUTURE OF HOSPICE AND PALLIATIVE CARE

Although the number of minorities enrolled in hospice and palliative care programs is increasing slightly, this group should still be considered an underserved population that merits further examination. Additional research is needed in the areas of preferences for, and barriers to, the use of hospice and palliative care services for minorities and other medically underserved populations. This area of research should also consider the needs of the frail older population and residents of nursing homes, particularly those who do not have family caregivers involved in their care.

It is essential that the societal perception of hospice and palliative care programs remain an accurate reflection of the model of care that is being provided to patients and their families. The most straightforward way to do this is through increased community education, directed at individuals of all ages as well as health care workers, about the availability of and services provided by local hospice and palliative care organizations. Along these same lines, it is imperative that the health care system is prepared to deal with the aging baby boom generation that has begun to reach retirement. A national survey of more than 1,500 bereaved family members found that those whose loved ones died under hospice care reported higher life satisfaction, fewer concerns with care, and fewer unmet needs than those whose loved ones died in a hospital or nursing home setting (Teno et al., 2004). Although it may seem that the take-home message from this research is that nursing homes and hospitals are incapable of providing quality end-of-life care, that is not the case. Rather, the lesson is that improvements need to be made in the education of health care providers on proper end-of-life care in all health care settings; hospitals, hospices, and nursing homes need to work in tandem to provide a continuum of care for all individuals with terminal illnesses, as well as their families, as they move through the health care system.

**SEE ALSO** Volume 3: *Caregiving; Death and Dying; End of Life Decision-Making; Health Care Use, Later Life; Long-term Care; Widowhood.*

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## HUMAN CAPITAL

SEE Volume 1: *Human Capital.*

# I

## INHERITANCE

An inheritance or bequest is the transfer of accumulated and unconsumed wealth after the death of one generation to the next generation. Wealth is defined as the value of property or assets owned. It is often measured as net worth or the sum of all property and financial assets, less any liabilities on those assets. Wealth, then, for successive generations is a function of one's own savings from income (or life-cycle savings) and inheritances received from the prior generation. Economists are concerned that inheritances may lead to increased wealth inequality because very few families hold the majority of the nation's wealth. Also, individuals who receive inheritances may be less motivated to work and save and thus, aggregate productivity declines, which has an effect on the overall economy.

The life-cycle hypothesis suggests that, ideally, there should be either no inheritances, or only accidental inheritances, which have a negligible effect on productivity and wealth inequality. In terms of wealth accumulation, the life cycle hypothesis suggests that families accumulate assets throughout their working years, and then later consume these assets in their retirement years. The extensive use of inheritances, however, suggests that families are motivated to leave an inheritance, which gives rise to the study of bequest motives, who receives inheritances, and how inheritances affect the economy as a whole.

### HISTORICAL TRENDS IN INHERITING WEALTH

Prior to the Industrial Revolution, the wealth distribution (including land) was highly skewed, with very few families owning the vast majority of wealth, and the majority of families owning very little wealth. In England economic growth was very slow, and thus inheritance played a major role in wealth accumulation and in the creation of societal wealth inequality. A slow growth rate meant that there were relatively few other opportunities to accumulate one's own fortune. Inheritances were dynastic, meaning that the purpose was to keep the family's wealth intact across generations. The main mechanism of inheritance then was called *primogeniture*, meaning that the eldest son inherited the bulk of the estate. Often the estate was entailed, which essentially cast the heir as more of a tenant than an owner of the property as legally he had to transmit the principal value of the estate to his eldest son. In this way, the dynastic family's wealth and power were maintained and even increased generation after generation. This system increased wealth inequality as the eldest son's siblings inherited very little.

In America, however, primogeniture never really took hold. Land was plentiful and the agricultural economy was fast-growing, which allowed individuals to create their own fortunes rather than depend upon an inheritance. The Industrial Revolution also played a role by causing the economy to expand rapidly, which allowed greater means for individuals to accumulate their own wealth, thereby decreasing wealth inequality somewhat. Thus inheritances as a means of wealth accumulation became less important in all countries that experienced the industrial revolution. Within several generations, the primogeniture forms of inheritance were replaced with *multigeniture* inheritance (e.g., equal share inheritance by all the sons), and in 1948 the Married

Women's Property Act allowed married daughters to receive an equal share of inheritance that was protected from their husbands. This bequest system still dominates into the early 21st century.

Jeffrey Rosenfeld (1979) claims that surviving spouses (wives) have gone from being a minor to a major beneficiary in the span of less than 100 years. By 1950 spouses became the primary beneficiary and often the executor of their husbands' wills. Rosenfeld attributes this change in bequest customs to "gains in longevity and patterns of mobility which made married people less dependent upon the descent group [previous generation(s) of family] and more reliant upon one another" (1979, p. 65). Men and women became egalitarian partners in marriage and, thus, each other's primary beneficiary. This practice has become normative, and children do not contest the will when the spouse receives the inheritance.

## THE AMOUNT OF WEALTH ACCUMULATION DUE TO INHERITANCES

Of major importance to researchers and policy makers is decomposing wealth accumulation into inherited wealth and noninherited wealth, as each has very different economic policy implications for programs such as public transfer programs, social insurance, and government taxes. Using the life-cycle model, Laurence Kotlikoff and Lawrence Summers (1981) found that life-cycle wealth accumulation makes up 20% of total wealth accumulation, whereas transfers and bequests make up 80%. Franco Modigliani (1988) measured transfers directly by asking for the amount of transfers received. He estimated that life cycle wealth from savings makes up 80% of total wealth accumulation whereas transfers and bequests make up 20%. The range of findings, from 20 to 80% of wealth coming from transfers, is too broad to use successfully in developing economic policy.

William Gale and John Scholz (1994) argue that the majority of transfers are inter vivos (while still alive) rather than bequests and that earlier models did not take this into account. They estimated that 43% of total transfers are inter vivos transfers, and that bequests constitute 31% of total wealth. Donald Cox and Frederic Raines (1985) reestimated using a slightly different formula and found that inter vivos transfers accounted for 58% of total transfers. They found that inter vivos transfers are three times as large as inheritances. Again, there is no consensus on the assumptions and elements of the models and therefore no consensus on the composition of wealth. There is disagreement over what should be included as inter vivos transfers—cash gifts, college tuition, the down payment on a home, the purchase or gift of a car, and so on.

## BEQUEST MOTIVES

Intergenerational transfers that occur because parents care about the welfare of their children are called altruistic bequests, and can be added to a life-cycle model such that parents spend some portion of their savings on bequests to their children. B. Douglas Bernheim (1991) found evidence that private savings are strongly influenced by the bequest desire. Altruistic bequests are hypothesized to equalize opportunities among offspring such that children who have less will receive a larger inheritance. The exchange model hypothesizes that parents provide bequests in exchange for care while they are still alive. This would also suggest an unequal bequest pattern unless all children provide an equal amount of help to the parents. The strategic bequest model argues that parents use threat of disinheritance to control children's behavior.

Research has found weak support for intentional bequest transfers. Cox (2003) finds that bequests are made equally to both sons and daughters regardless of their financial situation, which does not support altruistic bequest theory. This implication is shared by the literature that emphasizes bequests are entirely accidental. It may be that individuals over-save because length of life is uncertain and they do not want to spend their last days in poverty. Alternatively, it may be that parents want to treat all children equally despite differences in their economic situation. John Laitner (2001) finds that models fit best when one assumes that altruistic bequests are quite rare.

There is little consensus on bequest motives. One reason for the lack of consensus is that data on inheritances are very rare. Surveys of retrospective bequests received will not adequately include the amount of earnings the bequest has provided. The primary method has been to determine the amount bequeathed in a single year and then to "blow up" this amount based on assumptions regarding ages at which bequests are made and received in an econometric life-cycle model. The models make very restrictive assumptions, and there is no consensus on what goes into the models—and as these models are sensitive to the assumptions made, results vary.

Current research has continued using life-cycle models, except that many of the restrictive assumptions have been loosened. For example, Laitner (2001) developed a model that allows for mixtures of inter vivos transfers and bequests. Ignacio Ocampo and Kazuhiro Yuki (2006) allow for intragenerational heterogeneity in terms of age, ability, earnings shocks, and inherited bequest. Chengze Fan (2001) introduces a Markovian game framework. These studies do little to resolve the lack of consensus because theoretical work is lacking. Inheritance

scholars need first to agree on a theory of inheritances and bequest motives before determining the best way to model bequests and bequest motives.

## IMPACT OF INHERITANCES ON THE ECONOMY OR WEALTH INEQUALITY

If the life-cycle hypothesis held true and individuals' wealth only came from earnings and individuals consumed all their savings prior to dying, then the only wealth inequality would be due to age. Sixty-year-olds would have accumulated more wealth than 30-year-olds, and not have decumulated as much wealth as 80-year-olds. However, wealth is more unequally distributed than income. Edward Wolff (1996) estimated that the top 5% of wealth-holders accounted for 56% of wealth in the United States in 1995. According to Melvin Oliver and Thomas Shapiro (1995), less than 5% of the population reported inheriting extensive amounts of money in the early 1960s, but there was a strong correlation between reporting extensive bequests and having a high income. In 1970 four out of every five of the richest Americans were born to wealth, suggesting that wealth inequality is driven by inheritances.

In fact there is some evidence that inheritances do increase wealth inequality. The life-cycle model assumes no inheritances. Some families choose to leave inheritances, however, and thus save beyond their own lifetime needs. Laitner (2001) finds that dynastic bequest motivated households, or households that desire to keep wealth in the family, continue to build wealth until death. Thus, compared to households that follow the life-cycle model, the average inheritance is larger, which will increase wealth inequality. Burkhard Heer (2001) found that accidental bequests, which occur when the bequestor dies earlier than expected, caused a small increase in wealth inequality.

## INHERITANCE TAXES

Estate taxes are designed to redistribute wealth and increase equality. Because inheritances are not earned through merit, but by accident of birth, it is considered a good candidate for redistributive taxes. Heer (2001) finds that, indeed, the estate tax does reduce wealth inequality. U.S. policy appears to be inconsistent, reflecting Americans' ambivalence, in taxing inheritances. The cutoff level at which a deceased individual had to pay estate taxes increased from $170,000 in 1980 to $600,000 in 1987. This means that estate taxes were increasingly targeting only the very wealthy. If the estate tax cutoff had been lower, a greater proportion of the population would have paid estate taxes, leading to smaller inheritances for more families and thus decreasing wealth inequality. The tax cut enacted in June 2001 reduces the estate tax gradually, repeals it in 2010, and then reinstates it in its pre-2001 form at the beginning of 2011.

## FUTURE DIRECTIONS

An important future research direction is to examine racial inequality in inheritance. Research has shown that when net worth is used as an indicator of well-being, racial inequality is even more severe than other indicators suggest. Oliver and Shapiro (1995) found that 25% of White families compared to 60% of Black families had zero or negative assets in 1992. Racial differences in wealth may be due to racial differences in inheritance. African Americans born prior to the late 1960s were subject to residential, educational, and occupational segregation. This effectively precluded Blacks from accumulating wealth. Robert Avery and Michael Rendall (2002) investigated inheritances between a cohort of Black and White Americans. They found that life-cycle wealth accumulation is much more equal than inheritances. They forecasted that one-third of Whites compared to less than 1 in 20 African Americans would receive an inheritance of at least $25,000 (1989 dollars).

Changes in the institution of the family also may change bequest behavior. As of 2008, economic models treat the family as a single unit that makes bequest decisions with complete consensus. Cox (2003) asks how gender in the family might influence bequest decisions. Now that there are so many broken families, multiple families, stepfamilies, and half brothers and sisters in families, how might this family complexity affect bequest decisions? Among the elderly who live in retirement homes, there is a trend toward leaving bequests to their friends (Rosenfeld, 1979). As the population ages and more and more elderly live in retirement communities or assisted living communities rather than with their families, this might become even more normative.

Lastly, Keith Blackburn and Giam Cipriani (2005) examine the impact that the upcoming demographic transition (aging of the population) will have on wealth accumulation. Their model demonstrates that the demographic transition is linked to the flow of intergenerational wealth as development progresses. The upcoming demographic transition will place a burden on workers and it is possible that taxing inheritances, rather than earnings, may reduce some of that burden (Heer, 2001). Future directions suggest that the life-cycle model needs to incorporate inheritances so as to develop the best aging policies at the individual, family, and population levels.

**SEE ALSO** Volume 3: *Intergenerational Transfers; Pensions; Wealth.*

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***Erin Ruel***

## INTERGENERATIONAL RELATIONSHIPS

**SEE** *Caregiving; Family and Household Structure, Later Life; Grandparenthood; Inheritance; Intergenerational Transfers; Parent-Child Relationships, Later Life.*

## INTERGENERATIONAL TRANSFERS

Intergenerational transfers are usually defined as help—in the form of money, gifts in-kind, or time—between relatives. Examples include a parent's expenditure for a child's college tuition or an adult child's time spent running errands for an older parent. Most of the research literature in this area focuses on transfers between relatives living in separate households, partly because the household is usually considered the primary spending unit in economic analyses. This interhousehold focus also reflects the data sources available to researchers; more information is available on transfers *between* households than *within* them.

But one can imagine many intergenerational transfers that take place within households as well. The most obvious example is the gift of shared housing—parents who let their grown children live at home for free (or who take their own parents into their home) are making an intergenerational transfer. Further, there is no logical age constraint on what constitutes an intergenerational transfer; the time and money that a mother devotes to her infant might just as well be counted. However, conventions in the research literature are such that attention usually is limited to children who are old enough to live on their own.

A key definitional issue is that intergenerational transfers are usually restricted to assistance that is private (indeed, a synonym is *private transfers*) as distinct from governmental transfers, such as Social Security or publicly provided education, which also shuffle resources from one generation to another. This convention is not universal, however. For instance, Ronald Lee (1994) uses the term *intergenerational transfer* to encompass any source of transfer, be it private or public. In what follows, the term is used to refer to private transfers only.

Another defining characteristic of intergenerational transfers is whether a transfer occurs before or after a person is deceased. Intergenerational transfers take the form of either inter vivos transfers (i.e., transfers between two living people) or bequests. Because the latter is covered in a separate entry, this entry focuses mainly upon inter vivos transfers. Listed below are the primary reasons why intergenerational transfers are important:

- They account for substantial money and time expended by households.
- They affect the distribution of economic well-being in a population.
- They can interact with public transfers, possibly diluting their effectiveness.

- They can help young people overcome difficulties borrowing money.
- They can affect incentives to save.
- Their patterns can sometimes reveal the underlying motives for them (e.g., pure altruism versus two-way exchange).

**The prevalence and size of intergenerational transfers** Intergenerational transfers constitute a substantial sum of money no matter how they are defined, but obviously the exact figure depends upon the exact measure at hand. William Gale and John Scholtz (1994) provide a variety of estimates of private transfers in the United States. One estimate, which counts monetary support flowing between households, plus college payments and bequests, amounted to a little more than $200 billion in 1986. To put that number in perspective, it was roughly equal to aggregate consumer spending on cars and trucks that year. Gale and Scholtz report that up to 30% of U.S. households were involved in private transfers, either as givers, recipients, or both.

The figures cited above deal just with private transfers to children who are out of the house, but exclude the costs of raising dependent children. For a child born in 1999, the U.S. Department of Agriculture estimates that a middle-income family can expect to pay about $160,000 on food, shelter, and other necessities over 17 years of dependency (Lino, 2000).

Though financial transfers receive most of the attention in the literature, time-intensive help also has been shown to be an important form of intergenerational transfer. For instance, Kathleen McGarry and Robert Schoeni (1995) find that up to one-third of people in their 50s who have a living parent provide time-related assistance to them. Among those who provide time, the commitment is substantial—averaging more than 400 hours annually.

Intergenerational transfers are particularly important in developing countries, which usually lack the publicly provided social safety nets that high-income welfare states provide. For instance, the predominant form of social security in low-income countries is old-age support from children. Donald Cox and Marcel Fafchamps (2008) canvass several studies of developing countries and find that, for the modal country, about 40% of households either give or receive private transfers. Among recipient households, private transfers hover around one-quarter to one-third of total income.

Intergenerational transfers are associated with saving and capital formation, because one possible motivation for saving would be to leave an estate for one's children (Kotlikoff & Summers, 1981). There are, of course, alternative reasons for saving—the accumulation of wealth for financing one's retirement being the most prominent. Exactly how much wealth accumulation is fueled by the desire to make intergenerational transfers is a matter of some contention: Estimates have ranged from 20% to 80%. Gale & Scholtz (1994) argue that the true proportion is likely to lie within these two extremes.

**Patterns of intergenerational transfers** Private transfers have been found to flow from rich to poor in every country ever studied. In this sense they act like publicly provided social safety nets by helping to equalize the distribution of economic well-being.

Further, private and public transfers can interact—a point first made by Gary Becker (1974) and Robert Barro (1974). To see how, imagine that your indigent grandmother can no longer take care of herself and that you are considering taking her into your home and providing care for her yourself. But then, you find that she qualifies for Medicaid-funded nursing home care that is of comparable quality, so you choose that route instead. Opting for the publicly provided care is an example of the so-called *crowding out* of private transfers by public transfers.

The logic of crowding out implies provocatively unexpected outcomes. In the above example, Medicaid does not improve your grandmother's well-being because it merely supplants the private transfers she would have received otherwise. Instead, *you* are the true beneficiary of the program because your burden of caring is eased.

Most empirical studies suggest that the prospect of complete crowding out is remote, but that partial crowding out occurs. For instance, in the studies of developing countries surveyed by Cox and Fafchamps (2008), the modal response to a $1 increase in public transfers was a 25-cent fall in private transfers. In the United States, estimated crowding out is even weaker. Some studies even indicate that private transfers could rise in response to an increase in the income of the dependent family member (Cox, 1987).

**Motivations for private transfers** One obvious, and compelling, motivation for private transfers is familial altruism—the donor gives because he or she cares about the recipient's well-being. But another possible motive is exchange, that is, private transfers are given in compensation for some service that another family member provides. Elderly parents, for instance, might promise bequests in exchange for care and attention they receive from their adult children (Bernheim, Shleifer, & Summers, 1985). Inter vivos transfers might also be part of a two-way exchange of money for services (Cox, 1987). Exchange theory could explain occasional findings of a positive association between recipient income and transfers received if, for instance, children with higher

wages required larger private transfers in order to compensate them for the services they provide to their parents.

Some researchers have advanced a more nuanced approach of mixed motives—a blend of altruism and self-interest (Lucas & Stark, 1985). Cox, Bruce Hansen, and Emmanuel Jimenez (2004) find support for this idea—altruistic motives appear to prevail when recipients are in exceptionally dire straits; otherwise, patterns are more consistent with nonaltruistic motives such as exchange.

**The effects of age, gender, and relatedness** The aforementioned findings are concerned with income-related patterns of intergenerational transfers, but intergenerational transfers are affected by other variables, too; they follow distinct age trajectories (which often differ from one country to the next), for instance, and they are often targeted to female-headed households (Cox & Fafchamps, 2008). Further, there is evidence of nepotism in private transfers; closer relatives are favored, and, in the eyes of survey respondents, transfers to nonrelatives are more likely to be viewed as loans rather than gifts (Cox, 2004).

Some of these effects appear to have straightforward explanations. When looking at age patterns in the United States, for instance, private transfers are disproportionately allocated toward younger households. Such a pattern would make sense if younger people, who have not yet established the requisite track record to enable them to borrow from financial institutions, rely on familial transfers to help them overcome these borrowing constraints (Cox, 1990). Another life course-related influence is the function of private transfers as old-age support, particularly in developing countries with little in the way of formal pensions. An example is Vietnam, where much of private transfers tend to flow from young to old (Cox, 2004), a pattern that contrasts with that of developed countries such as the United States.

Those interested in life course patterns of intergenerational transfers should consult the work of Lee (1994) and Laurence Kotlikoff (1992). These authors take a comprehensive approach to resource flows among the generations, taking into account not only private transfers, but public transfers (such as Social Security) and private saving as well.

Further, any discussion of intergenerational transfers over the life course would be incomplete without recognition of the extensive—and essential—contributions of sociologists, demographers, and social psychologists. A key concept from sociology is that of norms: practices, traditions, and values enforced by societal or familial sanctions or rewards (or perhaps feelings of guilt) that affect one's behavior. Return, for instance, to the above example of contemplating whether to care for one's indigent grandmother. Key questions in the caregiving decision might be, "What is expected of me?" or "What is the most socially acceptable thing to do?" There is extensive evidence of strong gender norms in caregiving; women are more involved in caring for elderly parents than men, for instance. Life course factors enter into such decisions as well, as in, for instance, when adult children become sandwiched between the demands of caring for their elderly parents *and* children of their own. In addition to these forces, the exigencies of demography impinge upon caregiving; parents of the baby boom cohort have more children upon which to rely on in old age than their lower-fertility counterparts from earlier and later cohorts, for instance. (A particularly useful survey of social and demographic factors in caregiving is Colleen Johnson's *Perspectives on American Kinship in the later 1990s* [2000].)

**Evolutionary Biology as an Approach to Age, Gender, and Relatedness** Much of economic theory to date has taken a generic parent-child approach to intergenerational transfers, rather than considering, say, mothers versus fathers or sons versus daughters. But emerging evidence confirms that biological attributes such as motherhood and fatherhood indeed matter, even controlling for standard economic variables such as income or wealth. For instance, nearly all economic studies of the allocation of resources within households indicate that putting more money in the hands of mothers rather than fathers has the repercussion of benefiting of children.

The generic approach—for instance, positing a household inhabited by what amounts to spouses one and two rather than fathers and mothers—misses the biology, but still makes sense within a strictly economic framework because economics is about the effects of incomes and prices, not about motherhood or fatherhood per se. In contrast, however, evolutionary biology is about the nature of, say, motherhood, and some economists have availed themselves of insights from that discipline in order to complement and build upon strictly economic models of the family. (See, for example, surveys by Theodore Bergstrom in "Economics in a Family Way.")

To understand how a biological perspective can be potentially useful, consider a study of the expansion of public pensions to poor Black households in postapartheid South Africa. Esther Duflo (2003) estimated the effects of the income boost to the elderly on the health of young children (one-quarter of South African Black children under age 5 live with their grandparents). Duflo found that the presence of only one kind of grandparent—the maternal grandmother—affected child health. Strictly

economic considerations turned out to be insufficient in explaining this trend, but biological considerations can. If relatedness matters, then it may be noteworthy that, of all four grandparents, only the maternal grandmother can be 100% certain that the grandchild is a genetic relative.

Further, it turns out that several studies have uncovered a key role for maternal grandmothers. For example, Rebecca Sear and colleagues (2002) found that the mortality risk of young Gambian children depended more on the availability of maternal grandmothers than any other grandparent (and more than even fathers)—despite the fact that the villages investigated were patrilocal (suggesting a more prominent role for paternal grandparents).

This evolutionary approach to intergenerational transfers is quite simple, yet it generates an array of predictions concerning age, gender, and relatedness in familial transfers. It is one possible path to furthering knowledge about intergenerational transfers. The key idea emanates from a twist on the Darwinian dictum of "survive and reproduce," proposed by William Hamilton (1964), whereby survival and reproduction are envisioned to occur at the level of the gene, as opposed to the organism. A mother's altruism toward her child, therefore, is thought to be impelled by her behaving as if she seeks to perpetuate her genes.

Melding this simple idea to the facts of reproductive biology generates a wide variety of predictions and explanations. For example, a postmenopausal grandmother would be expected to be more altruistic toward her still-fertile granddaughter than vice versa, since the grandmother, no longer capable of bearing children, can only further the interests of her genes by providing assistance to relatives.

These kinds of hypotheses are controversial and are the subject of ongoing research. There is much more to family behavior than these types of evolutionary forces; economic incentives, societal pressures and norms, legal systems, religion, and culture are all likely to figure prominently into intergenerational transfer behavior. It is also possible that these kinds of cultural forces complement biological factors. For instance, the introduction of cash crops in northern Tanzania raised the value of land, and fathers began to bequeath their holdings to sons rather than to more distant relatives (such as nephews) as they did before land prices rose (Gulliver, 1961). The practice was immediately codified into law. Thus, the region's current inheritance practices may be rooted in biology and culture.

It is also important to point out that individual choice can supercede evolutionary pressure. For example, a father may feel driven, partly for biological reasons, to provide for his son's education, yet may still deliberately withdraw financial support if he does not think his son is working hard enough. Evolutionary explanations do not carry any presumption that a behavior is laudable. For instance, parental transfers to stepchildren have been found to be smaller than transfers to genetic children (Case, Lin, & McLanahan, 2000) and abuse of stepchildren has been found to be more severe than that of genetic children (Daly & Wilson, 1988).

The evolutionary perspective is but one example of the inherent interdisciplinary nature of intergenerational transfers. The subject has captured the attention of myriad disciplines: economics, evolutionary biology, sociology, anthropology, psychology, demography, and more. Accordingly, anyone interested in researching this subject would be well-advised to integrate findings from various disciplines into their approach in order to expand upon what the existing literature has to offer.

**SEE ALSO** Volume 3: *Caregiving; Family and Household Structure, Later Life; Grandparenthood; Inheritance; Parent-Child Relationships, Later Life; Social Security; Social Support; Wealth.*

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***Donald Cox***

# L

## LEISURE AND TRAVEL, LATER LIFE

The study of leisure in later life has a long history. In 1961 Robert Havighurst found that participation in leisure activities contributes to life satisfaction as people age. In the 1970s and 1980s a considerable body of knowledge was accumulated by scholars in North America and around the world (Howe, 1988). Much of that work was grounded in three gerontological theories: disengagement theory (Cumming & Henry, 1961), activity theory (Havighurst, 1961), and continuity theory (Atchley, 1988). In many respects the transition to retirement and later life and the accompanying role losses were a natural fit for scholars interested in leisure, because retirement often brings free time to enjoy hobbies, travel, and a leisure-oriented life style.

### ACTIVITY THEORY

Taking a lead from the popularity of activity theory in gerontology, much early research on leisure and later life was based on the premise that higher levels of participation in a range of activities contribute to greater life satisfaction in later life (Havighurst, 1961; Kelly, Steinkamp, & Kelly, 1987; Riddick, 1985). That premise was consistent with conceptualizations of leisure as a form of activity; researchers found that higher levels of participation in leisure activities were linked with higher levels of life satisfaction, which frequently was measured by using the Life Satisfaction Index (Neugarten, Havighurst, & Tobin, 1961).

Statistical models were developed, and when health and income were controlled, leisure participation was found to account for higher levels of life satisfaction than did other life-style factors. However, researchers came to recognize that leisure includes more than activities, and so they raised questions about the relevance of activity theory in studying leisure in later life. Similarly, in mainstream gerontology, researchers found that not all activities contributed equally to later life satisfaction. Larry Peppers (1976) found that participation in pursuits characterized as "active social" yielded higher levels of life satisfaction than did participation in pursuits characterized as "sedentary isolated." Other researchers (Lemon, Bengston, & Peterson, 1981) questioned the inconsistent findings among studies that used activity theory to predict life satisfaction and concluded that it did not explain the complexity of everyday life.

Thus, even though there is a consensus about the value of leisure participation in later life, current theorizing recognizes that not all leisure is universally and equally beneficial. Scholars generally find that different types of activity provide different benefits (Kelly, 1987), social interaction is often a key characteristic of the most satisfying forms of leisure (Nimrod, 2007), and the meaning of the activity to the individual is of the utmost importance (Gibson, Ashton-Shaeffer, Green, & Autry, 2003–2004).

### DISENGAGEMENT THEORY

Although the original articulation of disengagement theory stated that role loss and withdrawal from the community are negative and inevitable experiences for older adults, leisure researchers recognize that disengagement may be positive in that it provides opportunities for

individuals to engage in generativity and integration (Kleiber & Ray, 1993). In contrast to the pervasive view that leisure simply involves socializing and activity, Douglas Kleiber (2001) argued that leisure characterized by relaxation may give individuals an opportunity to reflect on their lives. Kleiber, building on the developmental psychologist Erik Erikson's stage theory, suggested that that type of leisure may allow midlife individuals to identify ways in which they can leave a legacy for future generations (generativity) and allow persons in the later years to put their lives into context (ego-integrity).

The work of Kleiber (2001) and others dovetails with the core components of Paul and Margret Baltes' (1990) theory of selective optimization with compensation. Both disengagement and selective optimization with compensation theories suggest that withdrawing from some activities and relationships is strategic because it lets individuals focus on the people and activities that are most meaningful to them as well as providing time for leisure contexts that facilitate the developmental tasks of later life.

## CONTINUITY THEORY

The theme of continuity is important in the study of late-life leisure. John R. Kelly (1982) suggested that individuals build a leisure repertoire in childhood and that as people move through the life course, the choice of leisure activities remains relatively constant. This hypothesis is consistent with the tenets of continuity theory (Atchley, 1988), which states that consistency in identity is maintained by expanding one's earlier social roles and adopting new roles. Kelly's work also underscores the importance of leisure throughout the life course: Building a full and diverse leisure repertoire in childhood has implications for a person's activities and well-being in later life (Yoesting & Burkhead, 1973). However, adults do change and develop new leisure interests as they age. Many individuals regard retirement as an opportunity to engage in many new pursuits, including international travel (Gibson, 2002). However, a core set of interests seems to persist throughout life (Mobily, Lemke, & Gisin, 1991).

## LEISURE AND LIFE TRANSITIONS

Leisure also is related to important life transitions, such as the transition to retirement. Gerontological research originally focused primarily on men's retirement, reflecting gendered patterns of employment over the life course (Szinovacz, 1992). However, with more women in the paid work force for much of their lives—especially among recent cohorts—this research focus is changing (Erdner & Guy, 1990). However, Toni Calasanti (1993, 1996) questioned whether women ever retire from their household responsibilities. Nonetheless, mainstream thinking still views retirement as freedom to do all the things individuals have always wanted to do, including travel and all their favorite activities. However, Barrie Hawkins (1990–1991) warned that most people never prepare adequately for a leisure-oriented life after retirement; this is where the crisis may occur among people who have been socialized into work roles and are uncertain how to make the transition to a life without work.

Another transition that may affect or be affected by a person's leisure pursuits is spousal bereavement. Ian Patterson and Gaylene Carpenter (1994) found that once the initial stages of bereavement pass, leisure plays an important role in the lives of widows and widowers by giving them ways to reconnect with others. The extent to which caregiving strains inhibit leisure is also an important topic of inquiry (Bedini & Phoenix, 1999). At a time when caregivers could benefit from the buffering effects of leisure on stress (Dupuis & Pedlar, 1995), they often are isolated from their friends and favorite leisure pursuits. Nancy Gladwell and Leandra Bedini (2004) examined the ways caregiving responsibilities affect leisure travel and found that caregivers often forgo vacations. Frequently, they would like to take the care recipient on vacation with them, but the logistics are often difficult.

## THE ROLE OF TRAVEL

Travel in later life is another common research focus, although many researchers are concerned with the business of travel and the senior traveler as a viable market segment (Javalgi, Thomas, & Rao, 1992). Although some of these studies have provided social scientists with insights into the variety of types of travel, choice of destinations, and motivations (Shoemaker 1989, 2000), they have not shown how travel contributes to later life satisfaction. Many individuals are avid travelers in later life and regard it as a meaningful experience (Gibson, 2002).

As part of the search for meaningful travel, the concept of educational travel has become popular among midlife and later-life individuals. In a study of participants in Elderhostel (a large not-for-profit educational travel organization for older adults), David Thomas and Frank Butts (1998) found that intellectual stimulation and social interaction are the most satisfying aspects of educational excursions. Older individuals also frequently travel to see friends and family and report participation in multigenerational activities such as grandtravel, in which grandparents take their grandchildren on trips (Lago & Poffley, 1993). It is of interest to scholars whether baby boomers have distinct travel and leisure patterns. An American Association of Retired Persons report suggests that boomers are much more interested in adventure travel than their predecessors were (Davies, 2005).

## SOCIAL ROLES, HEALTH, AND CIVIC ENGAGEMENT

Researchers are expanding their definitions of leisure and exploring the ways in which social roles and health shape the experience of leisure in later life. There is a focus on investigating the meaning of different leisure experiences and how they contribute to well-being in later life, such as the experiences of grandmotherhood (Wearing, 1996) and grandfatherhood (Scratton & Holland, 2006). Physical activity has become a popular focus in response to concern about inactivity over the life span (Sasidharan, Payne, Orsega-Smith, & Godbey, 2006) and the fact that recent cohorts of older adults are more likely than their predecessors to participate in competitive and recreational sports. Studies of competitive athletic events held expressly for older adults (e.g., National Seniors Game Competition) reveal that participation brings both physical and emotional benefits to participants, including the benefit of being part of a social community (Lyons & Dionigi, 2007).

***American Hiking Society Trip.*** *Two retirees dig holes to install bridge railings on the Virginia Creeper Trail within the Mt. Rogers National Recreation Area in southwestern Virginia, July 2004, during a volunteer vacation trip organized by the American Hiking Society.* AP IMAGES.

Another line of research into social involvement in community in later life involves volunteering, civic engagement, and building social capital through leisure (Maynard & Kleiber, 2005). Loss of social capital has become a concern (Putnam, 2000), and many scholars see older adults as people who are playing an active role in maintaining a sense of community and filling volunteer roles in local organizations. Scholars in many Asian countries are focusing on the experiences of older adults in relation to leisure and tourism (Lee, 2005), reflecting the rapidly growing older populations in those nations. In many ways this research is building on work from the 1980s that established that it is not just the activity but the meaning of activity that is the most important constituent of leisure in later life and that at the foundation of much of this meaning is the social context. These developments have taken researchers back to Kelly's (1987) contention that leisure is both social and existential.

**SEE ALSO** Volume 3: *Retirement; Theories of Aging; Time Use, Later Life.*

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# LIFE EXPECTANCY

Life expectancy is a demographic indicator that summarizes the level of mortality of a population or cohort. It is calculated on the basis of a set of age-specific mortality rates (deaths per population number by age), which describe how the risk of mortality varies with age in a given population or cohort, and indicates the number of years that an individual can expect to live given this set of age-specific mortality rates. Life expectancy can be calculated at any age (e.g., the life expectancy at age 65, which indicates the number of additional years that an individual age 65 can expect to live), but it is most often calculated at birth. In this case, it is interpreted as the number of years that a newborn can expect to live under a given set of age-specific mortality rates. It can also be interpreted as the average life span or mean age at death produced by a given set of age-specific mortality rates.

Life expectancy is a useful mortality indicator because it summarizes complex, age-varying risks of mortality in one single indicator that is easy to interpret (average number of years a person can expect to live). It thus allows convenient comparisons of mortality levels across nations,

population subgroups, time periods, and birth cohorts. However, this summary conceals information about the age pattern of mortality. When interpreting life expectancies, one needs to keep in mind that not everyone dies at the same age and that two populations with identical levels of life expectancy may experience quite different age patterns of mortality.

Life expectancies can be calculated for actual birth cohorts of individuals. In this case, cohort life expectancy summarizes a mortality experience that spans about a century, from the year when these individuals are born until 100 or more years later when the last members of the birth cohort die. Cohort life expectancies are rarely calculated, however, because they require mortality data for a period spanning 100 years or more, which are rarely available. Moreover, cohort life expectancies can be calculated only for cohorts that are now extinct and thus summarize past mortality risks rather than current risks. For more timely information, demographers calculate period life expectancies, which summarize mortality rates experienced over a short period of time, typically a calendar year. The period life expectancy at birth corresponds to the number of years that a newborn can expect to live under the age-specific mortality rates of that period. It is calculated by simulating a hypothetical cohort of individuals that would experience at each age the mortality risks of a given period. Under such a scenario, individuals born today will be exposed, when they reach older ages, to the mortality risks experienced by today's older individuals. Period life expectancies conveniently summarize the age-specific mortality risks of a period, but when mortality is rapidly changing, they provide little information about the average life span or mean age at death of actual cohorts of individuals. Because mortality tends to decline over historical time, the life expectancy for a given year typically underestimates the life expectancy for the cohort born that year.

## HISTORICAL TRENDS IN LIFE EXPECTANCY

Little is known about levels of life expectancy before the 18th century, but evidence from skeletal remains, burial inscriptions, parish registers, and records for unusual subgroups, such as monks or the aristocracy, provides some information about historical trends. Estimates of life expectancy at birth for the prehistoric period and antiquity are in the range of 20 to 30 years (Acsádi & Nemeskéri, 1970). These low levels of life expectancy are due in part to extremely high levels of child mortality, which have a large impact on life expectancy. It is estimated that for the prehistoric and early historic period, the percentage of newborns that died before age 5 was in the range of 44 to 60% (Hill, 1995). For the medieval period, a study of monks in England in the 15th century suggests a life expectancy at birth of about 22 years (Hatcher, Piper, & Stone, 2006), although the extent to which this estimate can be applied to the broader population is not clear. Estimates for England as a whole, generated from English parish registers, show that in the 16th century, life expectancy at birth was fluctuating in the range of 30 to 40 years (Wrigley & Schofield, 1981).

The first accurate estimates of life expectancy at the national level, based on exhaustive counts of population and deaths, come from Sweden. Figure 1 shows trends in life expectancy at birth, for males and females, since the earliest available year (1751). Levels of life expectancy at birth in Sweden in the second half of the 18th century were no better than levels found in England two centuries earlier. Improvements in life expectancy started during the 19th century, especially after 1850. Between 1850 and 2000, life expectancy at birth increased steadily from about 45 years to about 80 years. This rapid increase in life expectancy was initially due to reductions in infant and child mortality. Since 1950, however, reductions in old-age mortality have played a more important role. In light of the historical record, improvements in life expectancy in a country such as Sweden appear dramatic and relatively recent. Data for less developed countries show that, in many cases, the improvements in life expectancy have been even more rapid. Figure 1 shows estimates of life expectancy for India in the 20th century. Starting from levels in the early 20s around 1900, similar to estimates for the prehistoric period, India tripled its life expectancy, reaching levels in the early 60s by the end of 20th century.

A number of factors have been proposed to explain these dramatic increases in life expectancy. Factors can be organized in four categories: (a) improvements in standards of living (including improvements in nutrition and housing conditions), (b) advances in medical technology (including drugs, vaccines, and surgeries), (c) public health measures (such as the establishment of sewage systems and improvements in the supply and quality of drinking water), and (d) improvements in personal health behaviors (including personal and household hygiene). Explanations for improvements in life expectancy vary depending on time and place. Medical technology does not appear to initially have played a large role in more developed countries because, with a few exceptions, effective vaccines, drugs, and surgeries were not available on a wide scale until well into the 20th century, when life expectancy had already increased by a significant amount. These initial improvements are attributed to a combination of improvements in standards of living, which led to better nutrition, and to public health measures, which then led to better sanitation and water quality. The relative contribution of these two factors, however, is still debated.

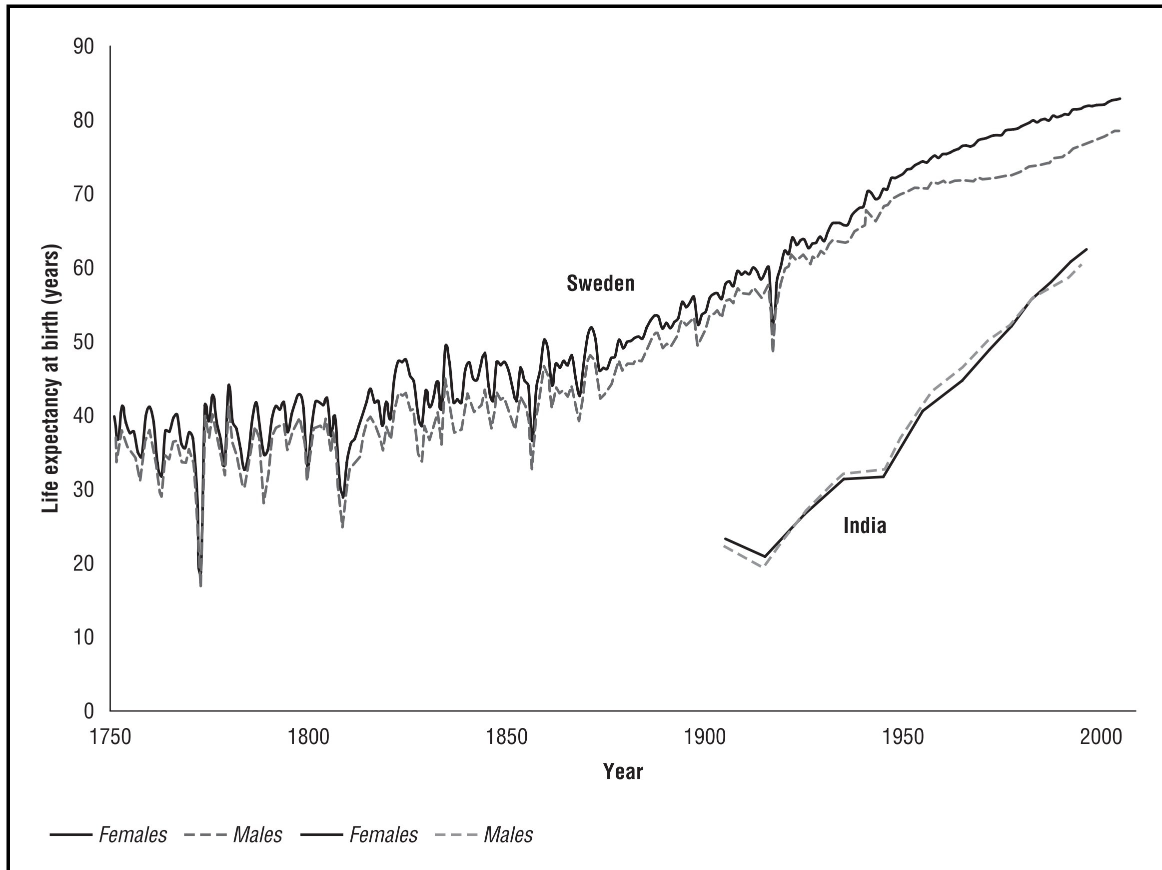


*Figure 1. Life expectancy at birth for Sweden and India.* CENGAGE LEARNING, GALE.

Around the turn of the 20th century, greater acceptance of germ theory led to important changes in personal health practices, which, together with the introduction of drug-based therapies in the 1930s and 1940s, explain the continued increase in life expectancy. (The germ theory doctrine simply holds that infectious diseases are caused by microorganisms.) Increases in life expectancy in more developed countries after 1970 are mostly due to better prevention, management, and treatment of cardiovascular diseases. In contrast with the experience of more developed countries, less developed countries were often able to achieve spectacular increases in life expectancy with few improvements in standards of living. These fast increases are explained primarily by public health campaigns, such as large-scale immunization campaigns, antimalarial programs, and other government programs.

In spite of impressive progress globally during the 20th century, there are still wide discrepancies in life expectancy across nations. For the period between 2005 and 2010, the estimated life expectancy at birth for the world as a whole is 67 years, but values for individual countries range from 40 to 42 in Swaziland and Mozambique to 82 and 83 in Iceland and Japan. Also, global progress does not imply that life expectancy will necessarily increase with time. A number of countries in sub-Saharan Africa have experienced sharp declines in life expectancy during the late 20th century as a consequence of the AIDS epidemics. Also, in Russia and other eastern European countries, a reversal in life expectancy occurred starting in the mid-1960s. Among Russian males, life expectancy at birth in 2006 was 60.35 years, which is lower than its highest point of 64.89 years in 1964. This reversal appears to be primarily due to alcohol consumption and its consequences.

## FUTURE PROSPECTS

Life expectancy is projected to continue increasing in the coming decades. Figure 2 shows estimates of life expectancy at birth by region for the period between 2005 and 2010, along with projected values for the period between 2045 and 2050. Every region of the world is expected to experience some increase, although the amount of increase varies by region. The smallest projected increases are for more developed regions. This does not necessarily imply that these regions will experience a slowdown in mortality decline. Mortality declines produce smaller increases at higher levels of life expectancy than similar

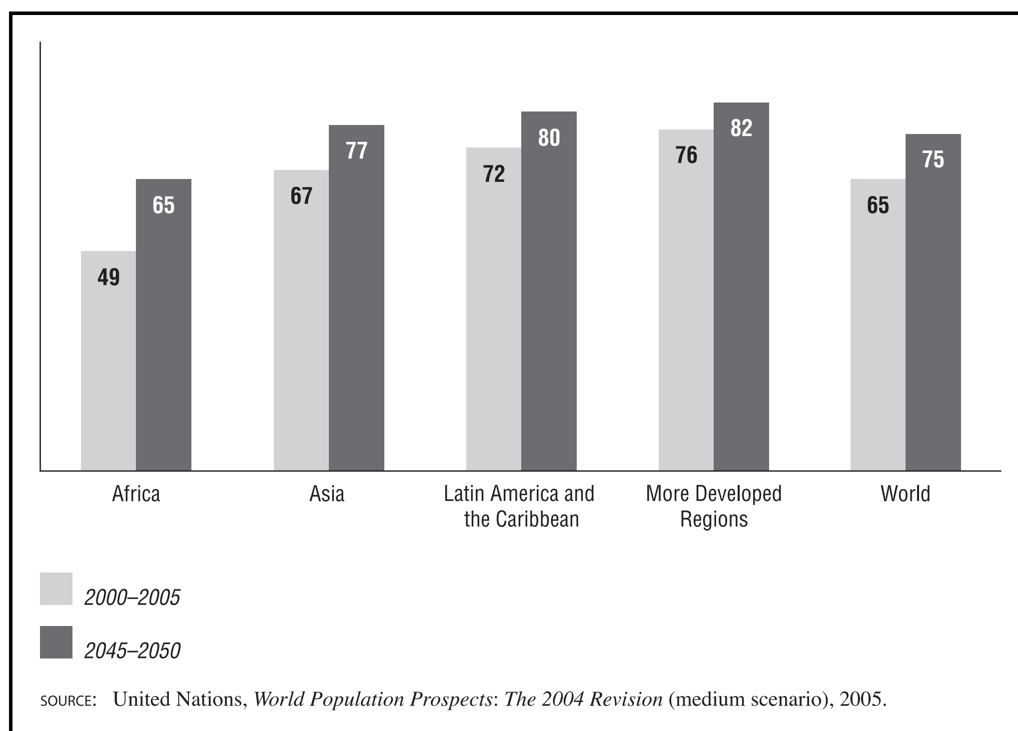


***Figure 2.*** *Trends in Life Expenctancy, by Region. Life expectancy at birth, in years.* CENGAGE LEARNING, GALE.

mortality declines at lower levels of life expectancy. Starting from the lowest level of life expectancy, Africa is expected to experience the largest increase in the coming decades. Note that these life expectancy forecasts are based on extrapolation of past trends. Unforeseen events, such as epidemics or technological breakthroughs, could produce different values than those presented in Figure 2.

## GENDER DIFFERENCES IN LIFE EXPECTANCY

Females typically experience higher levels of life expectancy than males. According to the World Health Organization, in 2006, life expectancy at birth was higher among females in every country of the world (Barford, Dorling, Smith, & Shaw, 2006). Nonetheless, the magnitude, and sometimes the direction, of gender differences in life expectancy have varied greatly over time and place.

Figure 1 presents data on male versus female life expectancy in Sweden and India. In Sweden during the 19th century and the first half of the 20th century, female life expectancy exceeded male life expectancy by only about 2 to 3 years. In the second half of the 20th century, however, the female advantage increased to reach 6.2 years in 1978, followed by a decrease in more recent years. In India, females experienced slightly higher levels of life expectancy around 1900, but progressively lost their advantage thereafter. This advantage was recovered in the 1990s, although girls still experienced higher mortality at infant or child ages in 2005 and 2006. In 2006, the largest gender differential in life expectancy was observed in Russia, with a male disadvantage of 13 years.

Gender differences in life expectancy are explained by a complex combination of biological and behavioral factors. Hormonal and genetic factors appear to contribute to males' lower life expectancy, by making them more vulnerable to infectious and cardiovascular diseases. Males' lower life expectancy is also explained by gender differences in behaviors and lifestyles, such as drinking, smoking, driving, occupation, and overall attitudes toward health. Smoking, in particular, explains to a large degree the increase in the male–female gap for life expectancy during the 1950s and 1960s in many developed countries. In some countries where life expectancy was lower among females, such as India during the second half of the 20th century, the female disadvantage seems to be related to the preference given to sons with respect to food allocation and medical care. Female disadvantages in life expectancy were also relatively common in European countries during the late 19th century and seem to be also related to women's lower status, as well as maternal mortality.

Future trends in gender differences in life expectancy are highly uncertain, but it is generally believed that the

## BIOLOGICAL LIMITS TO HUMAN LIFE

It is useful to make the distinction between maximum theoretical life span (the highest possible age at death that an individual could experience) and maximum theoretical average life span (the highest possible life expectancy at birth that a population could attain).

Researchers have not reached consensus on the existence of, or numerical values for, upper limits to maximum life span or maximum average life span. Although it has been claimed that a life expectancy at birth higher than 85 years is highly unlikely (Olshansky, Carnes, & Cassel, 1990), data show that Japanese females have already exceeded that limit, with a value of 85.81 years in 2006 (Statistics Bureau of Ministry of Internal Affairs and Communication, 2007). Also, the life expectancy at birth for both sexes in Japan, which was 82 years in 2005, is projected to exceed the 85-year threshold by 2025 and reach 87 years by 2050 (United Nations, 2007). Although these projections are merely extrapolations of past mortality trends, the absence of a slowdown in mortality decline in recent years suggests that, although future gains in life expectancy may be smaller than in the past, life expectancy does not appear to be approaching a limit.

Theory is of little help for determining a value for the maximum theoretical life span, but data on recorded ages at death provide useful information. The highest-ever recorded and verified age at death is for Jeanne Calment, a French woman who died in 1997 at the age of 122 years (Robine & Allard, 1999). Although this constitutes the all-time worldwide record, trends in the highest age at death recorded each year in individual countries show an extension of maximum life span since the 1970s. For example, data for Sweden show that the maximum recorded age at death increased during the period from 1861 to 1999, from about 101 years to about 110 years, with an acceleration after 1970 (Wilmoth, Deegan, Lundström, & Horiuchi, 2000). This has been interpreted as evidence that there is no sign of humankind approaching a finite limit to maximum life span.

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female advantage in life expectancy will continue to decrease in developed countries, due to the fact that male and female behaviors (smoking, in particular) have become more similar. In many developing countries, however, it is predicted that the female advantage will increase in a fashion similar to what was observed in developed countries during the mid-20th century, because males have been differentially adopting many of the behaviors producing excess mortality.

### SOCIOECONOMIC DIFFERENTIALS IN LIFE EXPECTANCY

Levels of life expectancy at the national level can mask important within-country differences by socioeconomic status (SES), race and ethnicity, marital status, area of residence, and other variables. The study of mortality disparities and their causes is important, because it allows the identification of disadvantaged subgroups and the formulation of policies aimed at reducing these disparities.

Whether SES is measured using education, occupation, income, or a combination of these variables, there is ample evidence that groups with lower SES experience lower levels of life expectancy than groups with higher SES. In the United States in 2000, for example, the difference in life expectancy at age 25 between individuals with only a high school education or less and individuals with any college was 7 years (Meara, Richards, & Cutler, 2008).

A multitude of factors potentially contributes to the observed socioeconomic differentials. The factors that are most often cited include housing conditions, occupational hazards, health behaviors (e.g., smoking, alcohol use, diet, and exercise), access to and utilization of health care, and psychosocial stress. It is also possible that the

relationship between SES and life expectancy is spurious and that other variables, such as poor health or social background, may cause both lower SES and lower life expectancy. There is no agreement about the validity of these various explanations.

In the decades leading up to the 21st century, there is evidence that socioeconomic differentials in life expectancy have increased in some developed countries, including the United States and Great Britain. In these countries, the life expectancy among higher socioeconomic groups has increased faster than among lower socioeconomic groups. This pattern is attributed in part to faster adoption of healthy lifestyles (better diet and more exercise) and better access to medical innovations in the area of prevention and treatment of cardiovascular diseases among individuals with higher SES. Differential trends in smoking by social class may also have contributed to the widening gap. Not all developed countries, however, have experienced a widening gap in life expectancy. In Canada, for example, the gap between people in low- and high-income areas declined between 1971 and 1996 (Wilkins, Berthelot, & Ng, 2002). Among French males, the gap between the life expectancy of managers and that of manual workers remained constant between 1980 and 1991 (Cambois, Robine, & Hayward, 2001).

In multiethnic or multiracial countries, levels of life expectancy typically differ by race and ethnicity. Perhaps the best-known example of such differentials is the Black–White differential in the United States. In 2003 the White advantage in life expectancy was 6.3 years for males and 4.5 years for females (Harper, Lynch, Burris, & Smith, 2007). Other countries where race and ethnic differentials have been documented include Brazil, South Africa, and the United Kingdom. Race and ethnic differences in life expectancy appear to be due in part to the fact that race and ethnic groups differ with respect to SES. Other factors that may play a role besides socioeconomic factors include cultural factors (which may shape health behaviors in distinct ways and may also shape norms and beliefs about social relationships), neighborhood effects, psychosocial stress associated with minority status and discrimination, and genetic factors. When studying the life expectancy of race and ethnic groups that are foreign-born, it is important to also consider the *healthy migrant* effect (i.e., healthier individuals may be more likely to migrate than their less healthy counterparts). The healthy migrant effect makes it difficult to interpret differences in life expectancy between foreign-born and native-born groups.

Another well-known differential in life expectancy is the differential by marital status. Studies have repeatedly shown that, in various countries and time periods, life expectancy is higher among married individuals than among unmarried individuals. There are two hypotheses for explaining this differential. The first hypothesis stresses the role of selection into marriage. According to this hypothesis, individuals who are in poor health may be less likely to marry, which could explain the lower life expectancy of the unmarried. Other individual characteristics, such as education, may both affect the likelihood of marrying and the risk of death and explain the observed differentials. The second hypothesis stresses the beneficial or protective effect of marriage on survival. Marriage may influence health behaviors (e.g., smoking, diet, and alcohol use) in positive ways, reduce psychosocial stress, and provide a more supportive social environment, which together may reduce mortality risks. Scholars agree that both selection and protection are operating factors, but the respective contribution of these two mechanisms has not been well established.

Another source of within-country variation in life expectancy is one's area of residence. The amount of variation depends on the choice of geographical unit for calculating these differences. In France, for example, the life expectancy disparity between the highest and lowest life expectancy at the *région* level (21 units) in 1994 was 4.5 years for males and 2.6 years for females. At the *département* level (94 units), the disparity was 6.2 years for males and 3.4 years for females (Valkonen, 2001; a *département* is on average four times the size of a U.S. county, and a *région* typically contains four *departments*). In the United States in 1999, the life expectancy disparity at the county level was 18.2 years for males and 12.7 years for females (Ezzati, Friedman, Kulkarni, & Murray, 2008). Regional differences in life expectancy are explained to a large extent by differences in the socioeconomic and ethnic and racial makeup of the population of these subnational areas. The healthy migrant effect, arising from both internal and international migration, is also likely to play a role. The possible causal effects of area, such as environmental factors (e.g., climate, air pollution, and water quality) and quality of health services, are difficult to quantify.

Although life expectancy is the product of a complex set of factors that are difficult to identify and evaluate, it remains a simple, and perhaps the least ambiguous, measure of human welfare.

**SEE ALSO** Volume 3: *Active Life Expectancy; Age Structure; Death and Dying; Demographic Transition Theories; Epidemiologic Transition; Mortality; Population Aging.*

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*Michel Guillot*

# LIFE REVIEW

SEE Volume 3: *Wisdom.*

# LIFE SPAN

SEE Volume 3: *Centenarians; Death and Dying; Life Expectancy; Mortality; Oldest Old.*

# LIFELONG LEARNING

Ancient and contemporary societies all over the world have understood the importance of learning continuously throughout life. The concept of lifelong learning, broadly defined as the process by which people consciously acquire formal or informal education throughout their lives for personal or career development, is not new. The imperative for societies to promote and organize continuous learning, however, is a recent development. Since the 1970s a steady flow of official documents, policy statements, and program initiatives have been implemented to support learning activities across the life course. Educators, employers, policy makers, and the public have recognized that knowledge obtained and skills learned by late adolescence or young adulthood are not enough to successfully adapt to rapidly changing cultural, social, political, and economic environments. Although lifelong learning has become a key principle of 21st century national and international educational policies, defining and equitably implementing this nebulous and multifaceted concept is a significant challenge.

## CONCEPT OF LIFELONG LEARNING

There is no universal definition of lifelong learning. It is an all-encompassing, generic term that overlaps with closely related concepts, such as continuing and adult education (Aspin & Chapman, 2000). Adult education typically refers to learning in structured programs, among people older than traditionally aged undergraduate college or university students. The age at which a learner becomes an adult varies greatly across sociohistoric and cultural systems, which have diverse political and economic priorities. Continuing education also serves adult learners, but does not normally include basic instruction programs, such as English as a second language (ESL) classes or preparation for high school equivalency exams. Continuing education students enroll in various postsecondary programs, such as university credit courses, workforce training, and formal personal enrichment classes offered on campuses and online. Lifelong learning encompasses continuing as well as adult education, and has burgeoned into a global concept that includes all forms of teaching and learning that equip individuals to encounter a broad range of working and living experiences (Jarvis, 2001).

Although diverse forms of learning from cradle to grave have taken place throughout history, up to the

1960s, education was predominantly equated with the schooling of young people (Mendel-Añonuevo, Ohasko, & Mauch, 2001). A few marginal institutions served adults' educational needs, but the main purpose of education was to socialize young people and prepare young adults (mainly males) for full-time employment. The 1972 United Nations Educational, Scientific, and Cultural Organization (UNESCO) report "Learning to Be" was one of the first attempts to institutionalize the idea of lifelong education, the conceptual precursor to lifelong learning. Also known as the Faure Report, this comprehensive vision advocated the right and necessity for all individuals to learn for their social, cultural, political, and economic development and recommended integrating adult education into a redesigned system, not simply tacking it onto the end of school education (Faure, 1972).

In 1973 the Organization for Economic Co-operation and Development (OECD) advocated a similar concept of recurrent education. Known as the Clarifying Report, this document proposed replacing the front-end model of education that concentrates organized learning on childhood and adolescence with an educational system that redistributes learning opportunities over the entire life course. The Clarifying Report advocated alternating education with other activities, such as work, leisure, and retirement, over the life course. Although reports from the UNESCO and the OECD articulated slightly different tactics and strategies for promoting lifelong education, they shared the belief that initial training and education should be followed by learning opportunities accessible to all citizens regardless of age, sex, race, ethnicity, or social class.

In 1996 the UNESCO's Delors Report advocated a semantic and substantive shift from lifelong education to lifelong learning. In the early 1970s lifelong education was conceived as a strategy for improving collective life as well as personal skills. Emphasizing the role of social institutions and structures, the goal of lifelong education was to develop more humane communities and individuals in the midst of social change (Bagnall, 2000). In contrast, the predominant interpretation of lifelong learning in the 1990s and 2000s has a stronger focus on individual skill acquisition in the face of a rapidly changing workplace (Jarvis, 2007). The economically motivated conception of lifelong learning has drawn sharp criticism since the late 1990s because of its emphasis on "learning to earn" and neglect of broader social contributions.

## LIFE COURSE THEORIES FOR LIFELONG LEARNING

Theories of lifelong education and learning are fragmented across several academic disciplines, including behavioral psychology, educational philosophy, and cognitive neuroscience. Indeed, it is questionable whether a comprehensive theory of lifelong learning is even possible given the vast number of factors that shape the process and context of lifelong learning (Jarvis, 2006).

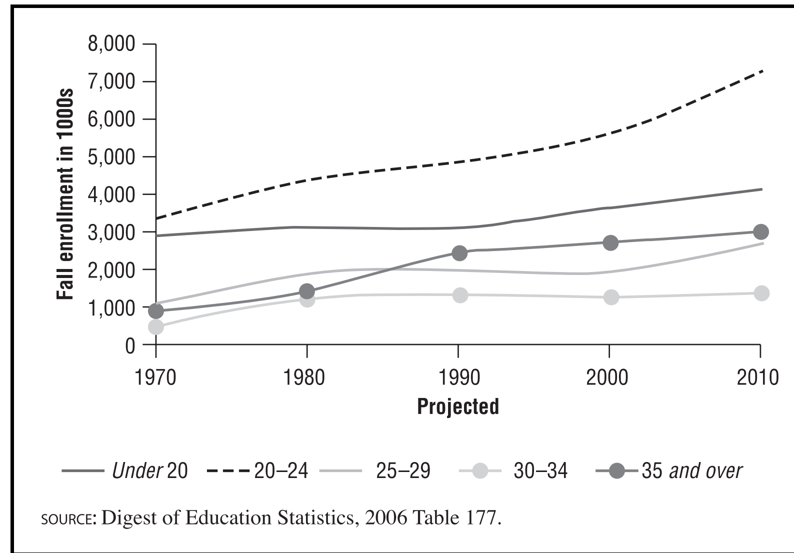
The life course perspective, which is a framework for studying people over time in historical context, offers one integrative approach to examining lifelong learning. By focusing on the developmental pathways people establish through constraints and incentives, the life course perspective highlights how events experienced early in life influence later life transitions and outcomes (Elder, 1994). Age stratification theory and the theory of cumulative advantage and disadvantage, both reflecting key insights of a life course perspective, offer insight into lifelong learning.

Matilda White Riley's (1911–2004) age stratification theory (1996) begins with the assumption that age, like gender and race, is a basis for grouping people into social categories and channeling them through different role expectations and opportunity structures. Such age-grading assigns education to the young, work and family responsibilities to the middle-aged, and leisure in retirement to the old, with each age-segregated life segment occurring within a distinct set of social institutions. The current approach to education, for example, involves an intensive concentration in the first 25 years of life, but lacks systematic attempts to update skills and knowledge throughout adulthood. In the United States there is a tendency to focus expectations and resources on early education, viewing education like a measles immunization: once given, it lasts a lifetime (Harootyan & Feldman, 1990). As the life course becomes more fluid, however, alternating periods of employment, formal education, and leisure across the life course will become a greater possibility.

The theory of cumulative advantage and disadvantage is also a useful lens through which to examine lifelong learning. This theory proposes that individuals who have early opportunities for success often build on that success to perpetuate and increase their advantages into later life (Merton, 1973). Just as the accumulation of advantage provides stratified access to material and psychological rewards, negative life events can have an enduring and multiplying impact over the life course (O'Rand, 1996). The theory of cumulative advantage and disadvantage may be used as a tool to understand how lifelong learning can be a mechanism for individual empowerment and for social exclusion (Hamil-Luker, 2005).

## TRENDS IN LIFELONG LEARNING

As evinced by the increasing numbers of adult learners and programs offered, lifelong learning has experienced burgeoning growth since the 1970s. Between 1971 and




SOURCE: Digest of Education Statistics, 2006 Table 177.

***Figure 1.*** *Total fall enrollment in degree-granting institutions by age, 1970–2010.* CENGAGE LEARNING, GALE.

1991, full- and part-time enrollment of students aged 35 and older at colleges and universities rose by 248% (National University Continuing Education Association, 1995). Enrollment trends for degree-granting institutions are presented in Figure 1. As shown here, since the mid-1970s universities have admitted substantial numbers of students over the age of 24. Although traditional aged students will continue to enroll in degree-granting institutions in the largest numbers into 2010, the greatest percent increase will be among those aged 35 and over (Snyder, Dillow, & Hoffman, 2007). From 2004 to 2014, the U.S. Department of Education projects a rise of 11% in enrollments of persons under 25, but an increase of 15% in the number aged 25 and over (Snyder, Dillow, & Hoffman, 2007).

In addition to the increasing numbers of adults pursuing university coursework, 88 million adults in 2000 and 2001 enrolled in basic skills classes, work training programs, or personal development courses (Kim, Hagedorn, Williamson, & Chapman, 2004). Excluding full-time programs, 44% of adults in the United States participated in formal adult educational activities in 2004 and 2005 (O'Donnell, 2006). Middle-aged workers are also increasingly likely to reenter vocational training (Elman & O'Rand, 1998). As a further indicator of the growing importance of lifelong learning, federal funding for adult education increased from approximately $201 million in 1991 to $585 million in the fiscal year of 2005 (U.S. Department of Health and Education, 2005).

Numerous economic, technological, and demographic developments have contributed to the proliferation of lifelong learning policies and participation (Sticht, 1998). The most powerful influence is the recognition among governments that an educated workforce can contribute to sustained economic growth, productivity gains, and national competitiveness in a global, knowledge-based marketplace. In its *Strategic Plan: 1998–2002*, for example, the U.S. Department of Education includes the goal of ensuring "access to post-secondary education and lifelong learning" so "adults can strengthen their skills and improve their earning power over their lifetime" (1997, p. 41).

New technological developments and rapidly dropping prices for personal computers, Internet access, and other technological tools have facilitated lifelong learning in homes, workplaces, and schools. Growing numbers of individuals engage in distance learning, where teachers and students are separated over space and time but have interactive communication. Raising the standard for what it means to be literate in the United States in the early 21st century, basic skills include new information and communication technologies.

The aging of the population in most developed nations has contributed to a growth in learning activities among older adults (Hamil-Luker & Uhlenberg, 2002). An overall increase in education levels, improved nutrition, and medical care have contributed to more disability-free years of life. This, in turn, has resulted in greater leisure time and interest in educational activities among older adults. Furthermore, neuroscience research has helped combat the myth of inevitable intellectual decline with age, showing that the brain has a lifelong capacity to reshape itself in response to experience (Bruer, 1999). Mental agility and

| Characteristic | Any Adult Education | Work-Related | Personal Interest | ESL | Basic Skills | Part-time College | Part-time Vocational | Apprenticeship |
|---|---|---|---|---|---|---|---|---|
| **Age** | | | | | | | | |
| 16–24 | 53 | 21 | 27 | 2 | 6 | 9 | 2 | 3 |
| 25–34 | 52 | 32 | 22 | 2 | 2 | 7 | 2 | 3 |
| 35–44 | 49 | 34 | 22 | 1 | 1 | 4 | 1 | 1 |
| 45–54 | 48 | 37 | 20 | – | – | 3 | 1 | 1 |
| 55–64 | 40 | 27 | 21 | – | – | 1 | 1 | – |
| 65+ | 23 | 5 | 19 | – | – | – | – | – |
| **Sex** | | | | | | | | |
| Male | 41 | 24 | 18 | 1 | 1 | 4 | 1 | 2 |
| Female | 47 | 29 | 24 | 1 | 1 | 4 | 1 | 1 |
| **Years of schooling** | | | | | | | | |
| No high school degree | 22 | 4 | 11 | 2 | 7 | – | 1 | 1 |
| High school degree | 33 | 17 | 16 | 1 | 1 | 2 | 1 | 2 |
| Some college/voc/associate | 51 | 31 | 25 | 1 | – | 6 | 2 | 1 |
| Bachelor's degree | 60 | 44 | 29 | – | – | 6 | 1 | – |
| Graduate/prof education | 66 | 51 | 30 | – | – | 7 | 1 | – |
| **Household income** | | | | | | | | |
| $20,000 or less | 28 | 11 | 16 | 1 | 2 | 2 | 1 | 2 |
| $20,001–$35,000 | 36 | 18 | 17 | 2 | 2 | 4 | 1 | 1 |
| $35,001–$50,000 | 42 | 23 | 22 | 1 | 1 | 2 | 1 | 1 |
| $50,001–$75,000 | 48 | 33 | 21 | – | – | 5 | 1 | 1 |
| $75,001 + | 58 | 39 | 27 | – | 1 | 5 | 2 | 1 |
| **Occupation** | | | | | | | | |
| Professional/managerial | 70 | 56 | 29 | – | – | 8 | 1 | 1 |
| Sales/service/clerical | 48 | 31 | 22 | 1 | 2 | 5 | 2 | 1 |
| Trade and labor | 34 | 19 | 13 | 2 | 2 | 2 | 2 | 3 |

Note: Estimate rounds to 0 or 0 cases in sample.

***Table 1.*** *Percentage of adults who participated in adult education by type of activity and demographic characteristics; National Household Education Survey 2004–2005.* CENGAGE LEARNING, GALE.

learning ability do not uniformly decline with advancing age, offering new learning opportunities for those in the *third age*.

Although there has been tremendous growth in lifelong learning, only a small fraction of those who could reap benefits are participating. The 2003 National Assessment of Adult Literacy, for example, found that 14% of Americans aged 16 or older in the United States have below basic literacy. More than half of the 120 million U.S. workers aged 25 to 64 do not possess a postsecondary degree (Neurohr, 2007). Cross-national survey data on literacy and numeracy suggest that the skills of U.S. adults do not compare favorably with their peers from other countries (Lemke & Gonzalez, 2006). Although increasing lifelong learning opportunity is frequently heralded as a way to solve these deficiencies, the proliferation of adult education and training programs may in fact contribute to increased social and economic exclusion. Groups who are already privileged disproportionately take advantage of educational and training opportunities. As shown in Table 1, those with the highest levels of education, income, and occupational prestige are the most likely to participate in lifelong learning. Furthermore, different groups are channeled into different types of academic and career-training programs. Adults aged 55 to 64, for example, are less likely to receive work-related training than those aged 25 to 54, but they are equally likely to enroll in personal interest courses. As employer demand for highly skilled workers grows and as the already well-educated pursue further training, those without favorably valued skills may fall further and further down socioeconomic and political ladders.

## FUTURE DIRECTIONS FOR LIFELONG LEARNING

From the highest levels of government to the lowest levels of impoverishment, there is widespread endorsement of the view that lifelong learning can resolve many of the economic, cultural, social, and political problems in the 21st century. Implementing lifelong learning, however, is hampered by lack of shared understanding of the term, difficulty in measuring it, diversity of learning opportunities, and lack of empirical research on outcomes. Most

education research still focuses on basic education for children and young adults, with comparatively little effort on studying adult education. A multitude of publications focus on motivations and cognitive development of individual learners, but neglect structural barriers, public policies, and the larger social and historic context in which learning occurs or fails to occur. Furthermore, the majority of statements about lifelong learning are formulated in positive terms, ignoring problems of access and issues of equity.

Discussions and debates over lifelong learning must be accompanied by evidence of how it works and the contributions it makes to societies. While there is some research on the economic benefits of lifelong learning for individuals, there is limited research on the institutional and national returns to investments in lifelong learning as well as the non-economic benefits that accrue to individuals. Furthermore, future research should assess the process by which lifelong learning is used as a mechanism of social exclusion. By examining program offerings and patterns of behavior among learners, researchers can identify segments of the population to be served and combat the tendency for lifelong education to contribute to inequality in the realms of employment, earnings, citizenship, health, consumption, and individual well-being (Field, 2006).

Although policy statements and experimental initiatives on lifelong learning have flourished, a redesigned education system in which people of all ages update their knowledge and skills over time has not been achieved. Translating endorsement of a concept into policy application is difficult (Istance, Schuetze, & Schuller, 2002). Indeed, the widespread provision of lifelong learning will entail a revolution in education systems.

**SEE ALSO** Volume 2: *Educational Attainment;* Volume 3: *Wisdom.*

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***Jenifer Hamil-Luker***

## LONELINESS, LATER LIFE

Loneliness has been defined as a sense of dissatisfaction with the number or quality of one's social relationships. Although loneliness may include an objective lack of social relationships, it has been more broadly conceptualized as a subjective discrepancy between desired and actual relationships (De Jong-Gierveld, 1987; Perlman & Peplau, 1981).

Two main dimensions of loneliness are social isolation and emotional isolation. Social isolation refers to a perceived lack of social ties and dissatisfaction with the number or frequency of one's social interactions, resulting in persons feeling left out, marginalized, or bored. Emotional isolation, by contrast, refers to the content and quality of relationships, representing a sense of disconnection, lack of intimacy, or loss of significant relationships. Emotional loneliness is experienced as a more profound and distressing feeling of "utter aloneness" (Weiss 1973, p. 21) and as an intense, emotionally painful experience that diminishes psychological well-being. A less studied component of loneliness has been described by Lars Andersson (1986) as existential estrangement, referring to a sense of aloneness arising out of awareness of one's own finiteness and mortality.

### OVERVIEW OF RESEARCH ON LONELINESS

Research on loneliness has been traced as far back as the late 1700s. In the 1950s, David Riesman's (1953) influential book, *The Lonely Crowd*, and the English translation of Émile Durkheim's (1951) classic, *Suicide*, established social isolation as a significant individual experience and as a characteristic of modern societies. Within the study of aging, early studies were influenced by disengagement theory, which described old age as a time of loss and gradual but inevitable detachment from social roles and relationships. Modernization theory and structural-functionalist perspectives on families reinforced the image of older adults as cast off from society and isolated from their kin and communities. In response, a number of researchers sought to document the ongoing social connection of older adults, redefining loneliness as a problematic individual experience that diminishes psychological well-being and is neither universal nor inevitable in old age. This research was focused on identifying the *deficits* associated with loneliness, including social losses, life transitions, and structural circumstances, as exemplified by Helena Lopata's (1925–2003) landmark research on loneliness among older widows.

***Lonely Nation.*** *Bob Moody, left, a volunteer companion for Rocky Lepore, fixes Lepore's collar before they go for a walk in Chicago. Moody is a member of "Little Brothers-Friends of the Elderly," a group that provides companionship for isolated elderly people in several American cities.* AP IMAGES.

Researchers also examined the role of physical and social environments in shaping loneliness, including living arrangements and senior housing, relations and contact with kin, and social networks and activities. These studies documented the extent and correlates of loneliness among older adults, but found few consistent links between objective circumstances and subjective reports of loneliness. These observations led to new and more precise definitions and measures of loneliness, which emphasized its subjective nature and its distinctness from other kinds of psychological distress and from objective indicators of social isolation.

## CONTEMPORARY RESEARCH CONTRIBUTIONS

Since the late 1980s, theorizing about loneliness has expanded to better conceptualize the complexity of loneliness, while research has continued to attend to the objective and subjective factors linked with loneliness. Ami Rokach's and Heather Brock's (1997) phenomenological approach has revealed the multifaceted experiences of loneliness through a five-factor *experiential conceptualization of loneliness* that includes emotional distress, social inadequacy and alienation, interpersonal isolation, and self-alienation, as well as the potentially positive growth related to loneliness. This model has been used to describe loneliness in different age groups and populations, though it has been tested only with nonprobability samples that may not describe the general population. By focusing on qualitative aspects of loneliness, Rokach's work has shed light on the benefits of recognizing and dealing with loneliness and the dangers of repressing or denying it. Particularly intriguing is its recognition of the potential of loneliness for positive outcomes such as motivating change and growth (Rokach et al., 2007).

Pearl Dykstra and Jenny De Jong-Gierveld (1994) in the Netherlands have also examined the complexity of loneliness, focusing on the underlying cognitive dimensions of loneliness and applications to large-scale studies of older adults. Their work has explored the important role of individual preferences, expectations, and perceptions in defining evaluations of loneliness. Differences among older adults are partly shaped by individual preferences regarding social networks and the importance of having an intimate partner relationship; loneliness reflects the cognitive discrepancy between actual and preferred relationships. Objective circumstances (such as health problems, disability, cognitive or sensory declines, or depression) may predispose older persons to loneliness, or they may represent barriers to actions that could reduce or ameliorate loneliness (Dykstra, 1995).

## MEASURING LONELINESS

Existing methods for measuring loneliness reflect these different conceptualizations of loneliness and the complexity of the concept itself. The most basic measures have asked respondents, "How often do you feel lonely?" (in a specified time period) or "Rate yourself on the following scale of loneliness." Single, direct questions are believed to tap into self-awareness of feeling lonely, especially with regard to emotional isolation. In large surveys, a single question provides an inexpensive measure of loneliness that is highly correlated with standard scales. The reliance on self-reporting, however, may underrepresent the true prevalence of loneliness. As loneliness is seen as an undesirable and stigmatized condition, individuals may be reluctant to disclose their feelings in response to a direct question.

Two commonly used scales for measuring the severity and intensity of loneliness, without explicitly referring to loneliness, are the University of California, Los Angeles, (UCLA) scale and the De Jong-Gierveld loneliness scale. The UCLA scale consists of 20 statements that provide a unidimensional assessment of social relations. Shorter versions have also been used successfully in research, including a three-item scale designed specifically for use in large telephone surveys with older adults. De Jong-Gierveld's (1987) 11-item loneliness scale, and a more recently developed six-item version, incorporate both positively and negatively worded items and measure overall loneliness as well as the components of social and emotional loneliness.

## PREVALENCE AND CORRELATES OF LONELINESS

A primary research concern has been to estimate the prevalence of loneliness in the general population (and within specific vulnerable subgroups) and to identify the factors associated with greater risks of loneliness. Estimates of loneliness in older populations vary, but roughly 5–15% of adults over age 65 report feeling severely or often lonely and as many as 40–50% of adults aged 80 and older report moderate or serious loneliness (Weeks, 1994). The relation between age and loneliness has been described as U-shaped, with the highest levels found among the oldest old but relatively low levels among most older adults (Pinquart & Sorenson, 2001). After accounting for structural circumstances, older adults seem to report less loneliness than those at younger ages and less than one might expect based on their objective circumstances, possibly due to more selective social networks and an increased acceptance of loneliness as a part of their life (Schnittker, 2007).

Marital status, intimate partner relations, and other family relations are central predictors of loneliness. Close ties serve as a source of social support and as a buffer against stresses. Loneliness is more prevalent among widowed persons (particularly in the initial period of

bereavement), and there is some evidence of greater loneliness among older adults who are divorced or have never married, particularly men. Gender differences in loneliness are inconsistent and highly related to marital status. Childlessness, however, is not consistently linked with loneliness after accounting for other factors (Koropeckyj-Cox, 1998). In general, the quality and closeness of social contacts are more important than quantity, and contacts with friends and neighbors are more influential than contact with kin, particularly among unmarried elders.

Living alone is related to loneliness, in part because of its connection with being unmarried. Higher levels of loneliness are found among elders living in nursing homes, and loneliness itself increases the risk of nursing home admission. Various studies have linked loneliness with poor physical health, including high blood pressure (Hawkley et al., 2006), Alzheimer's disease (Wilson et al., 2007), and suppressed immune function (Kennedy, Keicolt-Glaser, & Glaser, 1988), as well as with assessments of having worse health than expected (Victor et al., 2005) and a higher body mass index (Lauder et al., 2006). It is also correlated with depression (Cacioppo et al., 2006), other forms of psychological distress, and suicide (Kennedy & Tanenbaum, 2000).

## FUTURE RESEARCH DIRECTIONS

As populations continue to grow older, understanding loneliness as a component of psychological well-being and quality of life in old age will remain important. Changes in relationships and families are likely to present additional challenges, with smaller families and an increased prevalence of divorce, cohabitation, and childlessness among currently aging cohorts. These variations, combined with an increased emphasis on seeking personal self-fulfillment within intimate and family relationships, may increase the risks of loneliness in the future, particularly as nonfamilial community ties have weakened. Continued interest in loneliness will also be motivated by concern about enhancing physical and mental health and reducing the potentially preventable, negative consequences of loneliness.

The increased availability of large-scale studies of aging, including longitudinal data (where individuals are observed at more than one point in time), presents several avenues for future research. First, the influence of the life course perspective in research on loneliness is remarkably limited. Loneliness is usually studied through cross-sectional comparisons of current feelings, with relatively little attention to past experiences. A few studies have examined age, marital status, and childlessness in a larger life course context—by separating, for example, marital history from current status or permanent childlessness from having no surviving children. Some have used longitudinal data to examine changes over time. Future research will need to further explore how loneliness itself is experienced over the life course and how earlier or sustained episodes of loneliness or hardship (as well as coping and recovery) shape the preferences, evaluations, and strategies for dealing with day-to-day challenges. The life course perspective provides a conceptual framework for better integrating qualitative, experiential insights and new theoretical ideas about ambivalence in relationships into one's understanding of loneliness.

Second, further cross-national research may help to illuminate both the similarities and differences in cross-cultural experiences of loneliness. As De Jong-Gierveld and Betty Havens (2004) have recently noted, assessments of loneliness depend "on the prevailing (social) standards as to what constitutes an optimal network of relationships" and on the context in a particular society of "integrating or mediating structures" available to persons throughout the life course and in old age (p. 110). The prevalence, meanings, and implications of loneliness across societies are significant areas to explore for future research, particularly with regard to developing countries that are experiencing rapid aging and economic and social change. Cross-national, comparative research may provide an opportunity to reexamine and sharpen conceptualizations of loneliness as a "culture bound" phenomenon (Perlman 2004, p. 186).

**SEE ALSO** Volume 3: *Mental Health, Later Life; Singlehood; Social Integration/Isolation, Later Life; Social Support, Later Life; Suicide, Later Life.*

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# LONGEVITY

SEE Volume 3: *Centenarians; Death and Dying; Life Expectancy; Mortality; Oldest Old.*

# LONG-TERM CARE

Long-term care (LTC) encompasses the wide variety of services and support involved in the sustained delivery of health and social care to individuals with functional deficits due to disability or old age, according to Rosalie Kane and Robert Kane (1987). Although children and younger adults with disabilities or chronic health conditions may require LTC, it is much more common and most often associated with frailty in the later part of the life course. As individuals age, functional limitations increase and, for some, interfere with their ability to manage self-care needs without assistance. Individuals' LTC needs vary from a few deficits that demand regular but episodic assistance to those requiring total personal care. For example, many elderly individuals have occasional but persistent needs for help with instrumental activities of daily living, such as doing household chores, preparing meals, and running errands. When such needs are met, individuals retain independence and their capacity to age-in-place at home. At the other end of the spectrum, very frail elders may require assistance with most or all of the activities of daily living such as bathing, dressing, eating, toileting, and transferring in and out of chairs or beds. Some elders retain the physical capacity to perform those tasks for themselves but have cognitive deficits (such as Alzheimer's or other dementias) that require reminders and constant supervision to preserve their safety.

Different dimensions of LTC can be distinguished by (a) the population that needs assistance; (b) the source of provision (informal or formal); (c) the type, complexity, and intensity of services that individuals receive; and (d) the diverse settings in which LTC is provided. Due to population growth, the numbers of nonelderly individuals needing LTC will grow in coming decades whereas, among the elderly, the age group at highest risk for needing LTC (85+) is projected to more than triple from 6 million (in 2005) to 21 million people by 2050 (Feder, Komisar, & Friedland, 2007). Frail elders receive most of the home-based LTC they need from their families, with paid formal care filling the remaining gaps. When informal LTC occurs in the private sphere of the household, Tony Calasanti and Katherine Slevin (2001) point out, it has a taken-for-granted aspect that escapes much public attention. It is usually only when LTC is formalized because it requires private or public financing, involves public policy or regulation, or entails a move from home to a specialized residential care site that the costs and arrangements of LTC capture public attention. Consequently, the study of LTC populations, providers, policy, and services can inform debates around a range of issues, from gender patterns in providing and receiving care to later life financial stability to the merits and challenges of publicly funded social programs.

## TRENDS IN LTC

Individuals' LTC needs can be provided informally by family and friends or formally through purchase from public or private sources or may be supplied by voluntary

organizations. Family provision has always dominated LTC for frail elders. Even at the turn of the millennium, with a greater array of formal LTC services and providers than ever before, Ari Houser (2007b) indicated that most LTC is organized and rendered informally by family and friends who are not paid for their services. In fact, families provide an estimated 85% of all LTC (Kitchener & Harrington, 2004). Although informal LTC is unpaid, it has tremendous value. In 2006 the total economic value of informal LTC in the United States was estimated at $350 billion (Houser, 2007b).

Functional declines that often accompany aging mean that, as individuals get older, their likelihood of needing LTC increases (see Figure 1). Gender differences also shape the character of LTC, because women live longer and have higher rates of disability than men. As a result, elderly women require more LTC than men (79% of women compared to 58% of men) and for about a year and a half longer than their male counterparts (Houser, 2007b). A familiar pattern is married women who care for ailing spouses until they die and then require LTC themselves, a pattern typical in most developed countries. For older women, living alone increases the risk of social isolation, poverty (Ginn, Street, & Arber, 2001), and receiving LTC in a formal setting, such as a nursing home (NH; Freedman, 1996).

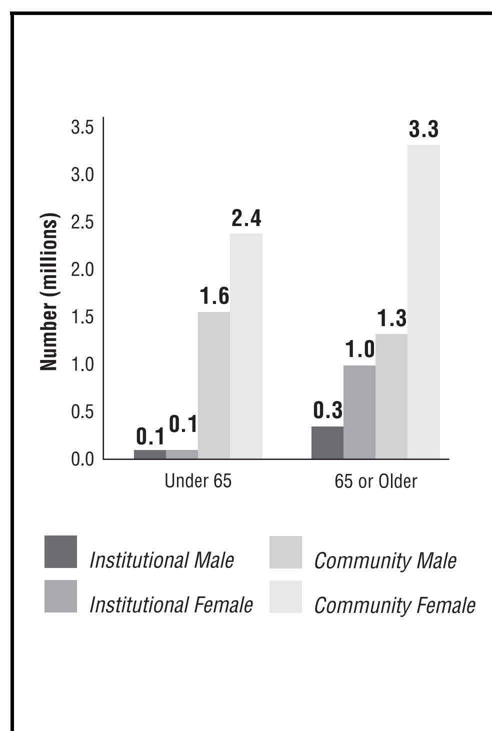


*Figure 1.* *U.S. adults needing help with everyday activities, by age, gender, and setting.* CENGAGE LEARNING, GALE.

Beyond differences in men's and women's LTC needs, LTC provision is also highly gendered. Strong cultural norms dictate that women—wives, daughters, daughter-in-laws, and sisters—care for parents or disabled relatives. As Francesca Cancian and Stacey Oliker (2000) explain, the idea that women should be almost exclusively responsible for providing LTC has roots in the 19th century ideology of "separate spheres" in which the home was the domain of women and men worked solely outside the home and reflects the assumption that women are "naturally" more nurturing and better suited to the task. Yet men provide informal LTC too (mainly for their spouses), albeit at much lower rates than women (Arber & Ginn, 1995; Calasanti & King, 2007). Compared to the kinds of intimate, often hands-on LTC women are mainly responsible for, men's LTC provision has long been presumed to be more instrumental, encompassing tasks such as financial support or help with house maintenance. However, recent scholarship challenges the notion that men necessarily perform LTC that differs greatly from what women do (Carroll & Campbell, 2008; Russell, 2007), although the amount of hours spent on such activities does differ.

Political forces also perpetuate gender inequality in LTC provision, particularly in the United States. Several European countries have policies supporting informal LTC. For example, German social insurance provides universal home care benefits, including cash allowances for LTC (even for services provided by family members) and also provides the safety net of formal LTC. However, resistance to big government coupled with powerful private business interests curtailed such efforts in the United States. Thus, the public LTC programs developed in the United States favor modest benefits, include formal provision, and provide little acknowledgement or support for informal LTC (Cancian & Oliker, 2000). The gendered nature of informal LTC has long-term effects of its own, because when women spend time out of paid work to provide LTC, the lack of public policy support means their socially necessary work is uncompensated. Women may lose wages by accepting part-time or more flexible, lower-paying jobs or by leaving the workforce altogether, putting their own financial security in old age at risk (Ginn, Street, & Arber, 2001).

## FORMAL LTC

When informal LTC is unavailable or needs for LTC assistance outstrip informal caregivers' capacity to meet them, formal services often bridge areas of LTC need. Widespread availability of formal services that help frail elders remain in their own homes is a fairly recent LTC innovation. Typical home-based LTC includes home health care, personal care and housekeeping services, transportation assistance, meals-on-wheels, adult day centers,

| | 1973–74 | 1977 | 1985 | 1995 | 1997 | 1999 | 2004 |
|---|---|---|---|---|---|---|---|
| Homes | 15,700 | 18,900 | 19,100 | 16,700 | 17,000 | 18,000 | 16,100 |
| Beds | 1,177,300 | 1,402,400 | 1,624,200 | 1,770,900 | 1,820,800 | 1,879,600 | 1,730,000 |
| Current residents | 1,075,800 | 1,303,100 | 1,491,400 | 1,548,600 | 1,608,700 | 1,628,300 | 1,492,200 |
| Occupancy rate | 91.4% | 92.9% | 91.8% | 87.4% | 88.4% | 86.6% | 86.3% |

SOURCE: CDC/NCHS, National Nursing Home Survey, various years.

***Table 1.*** *Trends in NH facilities, beds, residents and occupancy rates, 1973–2004.* CENGAGE LEARNING, GALE.

Alzheimer's respite care, and other local services available for purchase. However, not all LTC services are routinely available in every community or to every individual (Mor et al., 2007). Rural communities, in particular, often lack the formal home-based LTC services that are available in more urban areas. Lack of alternative services (Coburn, Bolda, & Keith, 2003) and patterns of traditional LTC admissions make NHs particularly critical sites of LTC in rural communities (Phillips, Holan, Sherman, Leyk Williams, & Hawes, 2004). Even where home-based services are available, many individuals cannot afford all services they need. Voluntary and nonprofit providers and Medicaid funding to purchase home- and community-based services can fill some gaps, providing essential LTC home-based services for frail elders at risk of NH placement. When LTC can no longer be managed at home, moves to specialized residential LTC sites often ensue. These can include institutional care provided in NHs (also called skilled nursing facilities) or increasingly popular and somewhat less institutional residential care settings such as assisted living, continuing care retirement communities, board and care homes, residential care facilities, and adult foster homes.

## NURSING HOMES

Until recently the most typical residential site for formal LTC in later life was the NH. Yet ending up in a NH when frailty occurs is not inevitable. Eighty-eight percent of U.S. NH residents were 65 or older in 2004, yet only 2% of the 65 to 84 population lives in NHs. Individuals who are long-stay residents in such homes are often extremely frail, and residents have become more frail over time. Preferred alternatives such as home-based services and assisted living have become more widely available, helping all but the most frail elders who can afford it to avoid institutionalization in NHs. In recent years, elderly Blacks have had higher rates of NH utilization than Whites, reversing historical trends; assisted living, in contrast, is dominated by White residents (Institute of Medicine, 2008). Almost four in five NH residents in 2004 needed assistance with four or five activities of daily living. Nearly half of residents had dementia, and more than half were confined to a bed or wheelchair (Houser, 2007a). Two-thirds of NH residents 65 to 84 and 82% of residents 85 and older were women. At the time of admission more than half of residents were widowed; only 20% were married or living with a partner (Houser, 2007a), reflecting the inevitable after-effects of patterns of spousal LTC provided at home. Because many elders with high LTC needs cannot afford to purchase LTC on their own, Medicaid eligibility entitles low-income individuals to NH levels of care. In the United States, retired women receive just over half the income that men counterparts receive; widowed women's incomes are even lower, according to Debra Street and Janet Wilmoth (2001), making the risk of admission to NHs especially high for low-income widows.

Formal LTC is in a state of transformation, as new residential LTC sites such as assisted living compete with NHs for clients, as more supportive home care services become available, and as reimbursement policies change. The NH industry has been reconfigured (see Table 1) to respond to changes in Medicare and Medicaid reimbursement policies (Street, Quadagno, Parham, & McDonald, 2003) and growing consumer preferences for LTC alternatives that permit individuals to remain in their own homes or other community settings, retaining their independence for as long as possible. The number of NHs peaked in the mid-1980s, but licensed NH beds increased until the late 1990s. Since then both the number of facilities and beds nationwide have declined, NH occupancy rates have stabilized, and NHs have been transformed from dominantly custodial residential LTC sites to increasingly skilled medical environments. Though entering a NH in the 1970s typically represented the last home for individuals before they died, Frederic Decker (2007) noted that by 2004 temporary admission to a NH to receive skilled nursing services and recuperate for a time-limited stay after an acute illness was nearly as common as a long-stay residential NH admission.

The number of NH residents in 1985 was nearly the same as two decades later, at the same time as the national over 85 population—the age group at highest risk for needing LTC—grew by more than 80% (Houser, 2007a). Medicaid reforms have reallocated resources previously used to reimburse predominantly NH-based LTC,

substituting home- and community-based services such as homemaking services, respite care, and services that provide appropriate but less expensive care in less restrictive environments. Medicare NH reimbursement policies have also contributed to more short-stay NH admissions, reducing the length of expensive hospital stays after an acute hospitalization (Street, Quadagno, Burge, & McDonald, 2003). However, trends of declining NH residency also coincide with people's desire to age in place in their own homes or to receive LTC services in more homelike, less institutional environments (Street, Burge, Quadagno, & Barrett, 2007).

High levels of formal LTC are expensive, no matter where the care is delivered, but that is especially true in NHs. In 2007 the average cost of a private room in a U.S. NH was $213 per day, or $77,747 annually; the average cost of a semiprivate room was $189 per day, or $68,985 annually (Metlife Mature Market Institute, 2007). The high cost of NH care has driven two trends. First, many individuals seek lower-cost alternatives, patching together needed services provided in their homes or making a move at about half the annual cost of semiprivate care in a NH (MMMI, 2007). Second, individuals who enter NHs as private-pay residents—even individuals of average means—can quickly consume a lifetime of savings and become impoverished. In 2007 poor frail elders or impoverished NH residents became entitled to Medicaid LTC when they met NH level of care needs and their assets were less than $2000 for individuals or $3000 for couples and their income ranged from Supplementary Security Income level $623 for a single individual per month up to 300% of the individual Supplementary Security Income level ($1,869 monthly, depending on income limits set by each state (Kaiser Commission on Medicaid and the Uninsured, Kaiser Family Foundation [KFF], 2007). When that happens, any income the individual receives (such as pensions or Social Security) is first applied toward the cost of NH care (except for a nominal personal allowance), and Medicaid pays the balance.

## KEY ISSUES IN LTC PROVISION

In 2005, public insurance—either Medicare or Medicaid—paid for the majority of formal LTC provided in NHs. Sixty-three percent of the total cost of all NH care was from public sources whereas only 26% was paid out of pocket, with the remainder purchased through private insurance or other sources (KFF, 2007). Medicaid pays the greatest share of LTC costs, purchasing 44% of all NH care (KFF, 2007) and 55% of home health care (Feder et al., 2007). Medicaid Home- and Community-Based Services (HCBS) waivers allow (but do not require) state Medicaid programs to pay for home-based services that delay or prevent the need for NH admission for physical therapy, assistance with maintaining the home, day care, meals, respite care, and other similar services. Since 1990 Medicaid expenditures shifted from 13% for HCBS and 87% for NH to 41% for HCBS and 59% for NH in 2006 (KFF, 2007). The Older American's Act (OAA; passed in 1965 and reauthorized several times since) also provides funds to states for community-based services designed to support independent living, such as adult day care and meals-on-wheels. Because OAA-financed operations offer home-based services to individuals without the stringent Medicaid eligibility criteria, they are important LTC resources for individuals with modest incomes. However, due to limited funding, OAA services and Medicaid HCBS services often involve long waiting lists.

The greater availability of formal, home-based LTC services, whether purchased privately or provided under Medicaid or OAA programs, has not supplanted informal LTC. Rather, availability of home-based services has been accompanied by an increase in informal care. A comparison of U.S. national data from 1984 to 1999 found that families were providing proportionately more care in 1999 than previously, whereas proportionate use of formal care had declined. Increasingly, family members were caring for relatives who were older and had greater disability (Spillman & Black, 2005), likely because the ability to purchase at least some home-based LTC services enables families to persist in offering high levels of often complex care.

To put the U.S. experience in perspective, a study of 12 developed countries (Australia, Austria, Canada, Germany, Ireland, Japan, Luxembourg, Netherlands, Norway, Sweden, the United Kingdom, and the United States) found that, even in countries with more extensive provisions for publicly funded services, much LTC is provided informally by unpaid relatives and friends. Most developed countries have moved toward providing publicly funded LTC in the home, thereby allowing people to age-in-place (Organisation for Economic Co-operation and Development, 2005). Both of these transnational patterns—high levels of informal care and moving publicly supported, formal LTC out of institutional settings to the home or community—are consistent with recent U.S. LTC experiences.

The impending old age of the baby-boom generation will likely mean a growing disabled population needing LTC over the coming decades, but that need will not necessarily be accompanied by more resources. Despite efforts to promote the purchase of private long-term care insurance, less than 8% of individuals 50 and older are covered, with coverage limited mainly to the most affluent. Many individuals cannot afford to purchase private LTC insurance or prioritize other kinds of spending. Some cannot purchase LTC insurance due to underwriting

practices that minimize insurers' risks by eliminating individuals with particular health problems from eligibility. Others do not purchase private LTC insurance because they are uncertain how to value a relatively expensive product in terms of very uncertain future needs. Regardless of the reason, private LTC insurance is not yet widespread nor does it that seem likely under current policy and market conditions (Feder et al., 2007). More older individuals and limited capacity to pay will surely put additional fiscal and service strains on the LTC system, which is already underfunded and unable to meet all of the LTC needs for frail elders (Kasper, Lyons, & O'Malley, 2007; Mor et al., 2007). Funding concerns, quality assurance, and creating and maintaining a high-quality LTC workforce are three critical issues for LTC in the United States and around the world.

Although other developed countries face similar challenges to their capacity to fund and provide enough high-quality LTC, given aging populations and economic uncertainty, Mary Jo Gibson and Donald Redfoot (2007) indicate that in the United States the fiscal pressures seem even more immediate. Debates about LTC are cast in somewhat different terms depending on the country in question. For example, in Germany the debate is over how to improve services and maintain the financial viability of the LTC insurance program, whereas in the United States much of the debate centers on scaling back publicly funded services (Gibson & Redfoot, 2007).

The quality of LTC care has long concerned researchers, policy makers, and families of frail elders alike. In the mid 1980s a scathing Institute of Medicine report (1986) was the catalyst to NH quality standards legislation and reform incorporated in the 1987 Omnibus Budget Reconciliation Act. Twenty years later NH quality standards were still problematic, and oversight of the quality of care in other LTC sites almost entirely lacking (Institute of Medicine, 2001). Although the United States has a nationwide NH quality standard, the logistics of multilevel regulation (federal/state) can be difficult to manage and uneven in application. U.S. researchers have devoted considerable effort to understanding the conditions that create or undermine high-quality LTC in NH and other LTC settings, finding that workforce issues, such as adequate staffing and staff training are central to high-quality care (Institute of Food and Agricultural Sciences, 2007; Kasper et al., 2007). However, the political will and resource streams required to improve the LTC workforce had not yet materialized in the early 2000s. Overwhelmingly, direct LTC workers are women, mostly single, many with less than a high school education, and disportionately Black, Hispanic, and non-U.S.-born (Institute of Medicine, 2008). An Institute of Medicine Report (2008) noted that the ability to recruit and retain direct care workers (certified nursing assistants, personal and home care aides, geriatric aides, orderlies) is "dire" for these essential positions that command low wages and few benefits despite the high emotional and physical demands of such jobs.

## LTC IN THE FUTURE

In countries with aging populations, meeting the challenges of creating an appropriately trained workforce to provide adequate levels of high-quality LTC in the settings in which individuals prefer to receive it and then paying for it is a source of ongoing debate. As baby boomers approach old age, there is growing interest in finding acceptable, affordable LTC strategies. Baby boomers are likely to have different expectations about where and how LTC should be delivered that may be an engine for innovation. At the same time, achieving adequacy and flexibility in both formal and informal LTC provision will be challenging. Women's high levels of labor force participation will limit their availability as informal LTC providers, and there is little on either the policy or economic horizon that suggests a windfall in public LTC funding.

One proposal for affordable, high-quality LTC would be publicly funded payments to active retired persons who provide LTC care in noninstitutional settings (Organisation for Economic Co-operation and Development, 2005). A trend toward longer retirement in most developed countries and larger groups of disability-free people over the age of 50 who are not in paid work create a pool of potential LTC providers. Using public policy to encourage this group to provide LTC for frail elders may allow their working children to continue employment, thereby contributing to the economy and simultaneously reducing the need for more expensive institutional services.

Another way LTC needs may be addressed in the future is through technological advances. For example, some segments of the population that currently lack access to LTC services (whether traditionally underserved or geographically/financially disadvantaged) could benefit from information and communications technologies such as in-home monitoring, telemedicine, and reminder services. Already, wearable, user-activated, medical alert pendants are in widespread use. Mobility aids such as well-designed walkers and powered wheelchairs improve frail elders' capacity to move around and enact self-care (Alwan & Nobel, 2007). New technologies, such as stair-climbing wheelchairs and environmental fall detection, may transform LTC in the future. Although the contours of the LTC provision landscape will continue to evolve, the need for LTC will also increase throughout the world in response to population aging. As long as there are old people, there will be a need for LTC (however it is

arranged) to address issues of frailty and the need for assistance in later life and for people and institutions willing to provide it.

**SEE ALSO** Volume 2: *Policy, Health;* Volume 3: *Assisted Living Facilities; Assistive Technologies; Disability and Functional Limitation, Later Life; Frailty and Robustness; Health Care Use, Later Life; Policy, Later Life Well-Being; Retirement Communities.*

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*Debra Street*
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## LOPATA, HELENA
### *1925–2003*

Helena Znaniecka Lopata was born in Poznań, Poland, and came to the United States with her family in 1939, when the Nazis occupied her country. Her father was the famed sociologist Florian Znaniecki (1882–1958), who coauthored the classic study, *The Polish Peasant in Europe and America* (1918–1920). Lopata received her Ph.D. in 1954 from the University of Chicago, and was a professor of sociology and director of the Center for the Comparative Study of Social Roles at Loyola University. Her tenure at Loyola University lasted from 1969 until 1997 when she retired. Over her lifetime, she published 20 books and scores of journal articles. In addition to her work on social roles and the life course, discussed below, she wrote on time, grief, loneliness, women's work, and the cosmopolitan community of scholars, of which she considered herself a member.

***Helena Lopata.*** COURTESY OF JUDITH WITTNER, PROFESSOR DEPARTMENT OF SOCIOLOGY LOYOLA UNIVERSITY.

In order to understand Lopata's approach to the life course, one must understand her theory of social roles, which builds upon the concept of social circles developed by her father, Florian Znaniecki. Znaniecki saw social circles as networks of social cooperation and collective action. Rights, privileges, duties, and obligations between the members of the social circle and the person at its center—the wife, mother, or widow, to name the roles that interested Lopata—allowed that central person to negotiate with members of the circle to define and execute her role. This perspective on roles replaced a static and individualist concept with one that was both collective and fluid. In Lopata's role theory, the entire social circle through its reciprocal relationships with the named role incumbent produces and enacts the role. For example, the mother role includes both "the person defined as the mother *and* the circle with rights and duties" (personal communication, July 2002).

Lopata envisioned the life course as a "shifting agglomeration of roles that marks a person's passage through life" (Wittner 2003, p. 174). In her life course analysis, that shifting agglomeration—biography—intersects with historical changes, so that even as women moved among their roles as wives, workers, mothers, empty nesters, and widows, the wider contexts within which they acted were also changing. Lopata's shorthand term for historical change was *modernization*, the term her father and his contemporaries favored. This term refers to the movement from a simpler time to a time of increasingly complex institutions such as the economy and the system of education, which offered women release from immersion in family life. Lopata focused on the potential and actual advantages of modernizing society to women and muted any concern with power and conflict. Her empirical studies documented how women were moving from lives defined almost totally by family relations to more complex involvements in multiple institutional contexts. To Lopata, these more complex involvements saved women from potentially damaging dependency on husbands and families, mitigated the losses incurred at different life stages (the departure of children, the death of a husband), and enriched their lives and self-concepts.

Lopata's method of life course analysis was based on her theory of social roles. She focused on the intersections of biography and history at the turning points in women's lives. She explored the ways that traditional social supports for women were declining and also the ways that women were constructing new networks of support and new self-concepts at these critical junctures. This method is apparent in two major bodies of empirical work on the life course that Lopata produced over her lifetime.

Lopata's first empirical work was her study of housewives in suburban Chicago, which she initiated in 1956. *Occupation: Housewife*, published in 1971, was pathbreaking in its choice of subject matter, the lives of American housewives. Lopata's unerring instinct for timely sociological questions led her to this topic long before other sociologists understood how changes in women's lives were central to the emerging transformations of U.S. society. In *Occupation: Housewife*, Lopata explored how young wives and mothers in the new suburbs of postwar America left behind social circles of support that women had enjoyed in close-knit urban neighborhoods. Isolated from families and friends, they became emotionally and economically dependent on their husbands. Lopata found that some women remained trapped in these ''flattened'' life spaces inside families, whereas others negotiated more flexible marital roles and moved on to professional careers and wider institutional connections, remaking their lives as traditional social supports slipped away. In *City Women* (1984) and *Circles and Settings* (1994), Lopata furthered her notion of the life course as a sequence of stages through which women moved historically as well as individually, from traditional extended family systems, through a transitional period marked by the disorganization of long-established roles, to the emerging modern stage of greater equality in families and wider access to the male-dominated public sphere.

Lopata's research on widows forms a second body of empirical work to which she applied her theoretical framework. As in her studies of housewives, Lopata focused on the historically changing experience and meanings of widowhood. Where once American widows had been embedded in and dependent for support on extended kin networks, particularly those of in-laws, in contemporary society their duties and rights as widows within their social circle were narrowed, making the widow role temporary. Her research revealed that after briefly mourning with and assisting the new widow, circle members left the widow to rebuild her identity as an unmarried woman without their help. Nevertheless, Lopata interpreted this contemporary practice as essentially progressive, arguing that, like the suburban housewives she studied earlier, contemporary widows were increasingly likely to lead multidimensional lives, returning to school, entering the labor force, and constructing new roles and circles of support that allowed them to make successful and satisfying transitions to their postmarital lives.

In her empirical and theoretical work on women's lives, Lopata explored how women inhabited and transformed their social roles during the last half of the 20th century. The story she tells is about slow progress toward a society of autonomous but interdependent women linked together with men in multidimensional social circles beyond families, circles that they themselves had helped to construct. By focusing on women's responses to a shifting social order, Lopata showed the positive side to the vast changes they confronted. By fashioning alternative life courses in response to change, women were, she believed, leading the way toward creating a more egalitarian and democratic public sphere.

**SEE ALSO** Volume 2: *Roles; Znaniecki, Florian;* Volume 3: *Widowhood.*

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# M-N

## MARRIAGE IN LATER LIFE

Marital status is an important influence on the physical and mental health and economic well-being of older adults. Extensive research has documented the positive effects of marriage on health (e.g., Lillard & Panis, 1996; Ross, Mirowsky, & Goldsteen, 1990; Smith & Zick, 1994; Umberson, 1992; Waite, 1995). Individuals who are married tend to have lower mortality rates (Goldman, 1993; Ross et al., 1990), better physical health (Waldron, Hughes, & Brooks, 1996), and better psychological well-being, compared to their unmarried counterparts (Barrett, 2000). The protective effect of marriage on both physical and mental health has particular importance for older individuals. The number of older married adults is increasing along with life expectancy, and marriage potentially influences health behaviors, the likelihood of having a spousal caregiver, and financial resources, all of which have been shown to affect physical and mental health in older adults (Ross et al., 1990; Tower & Kasl, 1996). The following discussion of marital status in later life focuses on (a) a demographic portrait of married versus unmarried adults aged 65 and older in the United States, (b) the connection between marriage and health, (c) the impact of widowhood on health among older adults, and, finally, (d) marital satisfaction in later life.

### MARITAL STATUS

According to the U.S. Census Bureau (2004a), older married persons constitute almost 16% of all married people in the United States. Approximately 13% of the U.S. population is over 65, and older individuals are slightly underrepresented among the married population. More than half of adults over age 65 in the United States were currently married in 2003, and nearly one-third were widowed (U.S. Census Bureau, 2004a), the vast majority of whom were women (80%). This translates into dramatically reduced income for these women, as 90% of those widowed had personal earnings of less than $5,000 per year. In terms of ethnicity, older non-Hispanic Blacks were more likely to be widowed than non-Hispanic Whites, Asians, or Hispanics (U.S. Census Bureau, 2004a), reflecting Blacks' elevated mortality risks relative to other ethnic groups in the United States.

Divorce is far less common in the older population than in younger age groups, likely reflecting cohort rather than age trends because divorce was relatively rare when current cohorts of older adults were young married persons. Approximately 8% of older adults are currently divorced (U.S. Census Bureau, 2004a). The majority of older divorced persons are female, reflecting women's greater survival and the fact that men are more likely to remarry—thus "exiting" the pool of divorced persons. As with those who were widowed, most had personal earnings of less than $5,000 per year. Finally, older non-Hispanic Blacks were more likely than non-Hispanic Whites, Asians, and Hispanics to be divorced (U.S. Census Bureau, 2004a).

Marital status has direct effects on the living arrangements of persons over age 65. Women's greater likelihood to both become and remain widowed translates into a large number of female-headed households among older adults. Women over the age of 65 are almost four times more likely than men to head a household without a spouse (U.S. Census Bureau, 2005). The living

arrangements of married older persons also differ by ethnicity. Non-Hispanic Black, Hispanic, and Asian older married persons are more likely than their non-Hispanic White counterparts to live with other family household members (U.S. Census Bureau, 2004b). The differences in household composition are likely to be due to differences in cultural ideals, health status, and the economic resources required to maintain an independent household (Peek, Coward, & Peek, 2000).

## MARRIAGE AND HEALTH

A substantial body of research reveals that being married is strongly linked to positive health outcomes (Ross & Mirowsky, 1989; Umberson, 1987). Two general explanations are offered for the connection between marriage to health: selection and protection. The first process, social selection, refers to the tendency of healthy individuals to marry or to have better marital prospects. Thus, having better health, which leads to a longer life, also makes marriage more likely. Being married, however, may cause people to have better health. This process is referred to as protection. The protection argument suggests that there are beneficial influences of marriage on social, psychological, and physical resources that are connected with physical health, mental health, and mortality (Christakis & Allison, 2006; Schone & Weinick, 1998; Stimpson, Kuo, Ray, Raji, & Peek, 2007). If protection mechanisms are at play, the statistical association between marital status and health reflects the fact that health shapes marital status, rather than vice versa.

In general, although there is some evidence of selection (Lillard & Panis, 1996; Waldron et al., 1996), there is more substantial support for marriage being protective of health (Smith & Zick, 1994; Waite, 1995). There are three dominant mechanisms through which marriage is hypothesized to affect health: (a) risky/healthy behaviors, (b) social support, and (c) economic resources. First, marriage is associated with reducing risky or dangerous behaviors, such as smoking, drinking, and not wearing seat belts (Schone & Weinick, 1998; Umberson, 1987). In addition, some evidence shows that marriage is associated with individuals' performing health-enhancing behaviors, such as regular visits to the doctor, exercise, and eating well (Schone & Weinick). Second, marriage may provide social support. Being married, at least in a healthy and supportive marriage, is associated with feeling loved, esteemed, and cherished (Ross & Mirowsky, 1989). In addition, individuals who are married are more likely to report that they have a confidant (Ross et al., 1990). Furthermore, support from one's spouse also influences recovery from illness and facilitates coping behaviors (Ducharme, 1994; Schröder, Schwarzer, & Endler, 1997). The emotional benefits of marriage depend, however, on the quality of the marital relationship, with healthy marriages providing the richest rewards (Gove, Hughes, & Style, 1983; Umberson, Williams, Powers, Liu, & Needham, 2006). Third, marriage is associated with increases in financial resources. Married individuals have higher household incomes, on average, than single individuals (Smith & Zick, 1994; Waite, 1995). The pooling of resources and economies of scale, where two can live almost as cheaply as one, potentially influences health, because economic well-being is strongly related to health (D. R. Williams, 1990).

How these protective effects translate into health outcomes is most apparent with the example of mortality. The effects of marriage on mortality are well established in the United States as well as other countries (Brockmann & Klein, 2004; Lillard & Panis, 1996). Married adults have lower mortality than never married, widowed, or divorced individuals. In the early 1990s researchers reported that mortality rates were 250% higher for unmarried men than married men and 50% higher for unmarried women than married women (Ross et al., 1990). These findings additionally corroborated the widely believed assertion that marriage is more protective for men than for women. For example, the transition into marriage is thought to be beneficial for both men and women, but men experience immediate reductions in mortality whereas women do not. Furthermore, the transition out of marriage increases mortality rates for men, but for women the effects seems to be more gradual (Brockmann & Klein, 2004).

Since the late 1990s, however, researchers have challenged the broad claim that married adults have better health. Rather, the focus of studies on marriage and health has shifted to examining the effects of marital history on health, particularly marital transitions and marital quality. First, one group of researchers suggests that the link between marriage and health can be viewed from two different perspectives: resource and crisis. The resource model argues that marriage brings greater support, both financial and emotional, and better health behaviors. The main emphasis of the crisis model is that differences in health due to marital status reflect stress and strain revolving around the event of marital dissolution. Thus, the crisis model suggests that individuals who transition from married to divorced or widowed may experience a brief decline in health, but after a specified period the unmarried individuals' health statuses will be similar to those who remained in a married state. Kristi Williams and Debra Umberson (2004) showed with nationally representative data in the United States that the health of the continually divorced and never married is similar to that of the married. These researchers also found that transitions appear to more negatively affect men's health than women's. They argue that these findings support the crisis model—that marital status differences in health reflect stresses of divorce and widowhood rather than resources provided by marriage. These

***You May Kiss the Bride.*** *Lee Becker, 91, and Velma Becker, 84, now Mr. and Mrs. Lee Becker, kiss at the end of their wedding.* AP IMAGES.

findings are generally upheld in data from other countries as well (Brockmann & Klein, 2004).

Second, research on the influence of marital quality on the relationship between marriage and health yields further challenge to the idea that marriage is beneficial to health under any condition. Research on marital quality focuses more on mental health than on physical health. K. Williams (2003) argued that, in addition to the deeply ingrained idea that marriage is more beneficial to men, the notion that marital quality affects women more than men has rarely been challenged in research. She showed with nationally representative data from the United States that the effects of marital status, marital transitions, and marital quality had very similar effects on psychological well-being for men and women. One key and expected finding with regard to both genders is that exiting marriage is related to increased depression only among adults who have high marital quality. For those with poor marital quality, exiting marriage is associated with a decline in depression. In summary, the long-held tenet that marriage is protective of health, although generally upheld, does have certain conditions under which it is "truer" than under others.

## WIDOWHOOD AND HEALTH

Of particular interest to researchers is the relationship of spousal loss to health. Research has suggested that widowhood is associated with poor health outcomes, especially depression (Mendes de Leon, Kasl, & Jacobs, 1994; Turvey, Carney, Arndt, Wallace, & Herzog, 1999). With increased longevity comes the issue of increased time spent potentially without a spouse. In addition, a continued high divorce rate coupled with the aging of the baby boom generation may also lead to increased divorce rates among older adults. It is important to separately explore the health effects of these life transitions in order to better understand their significance.

More than 10.5 million adults over the age of 65 are widowed. Multiple health issues can accompany the transition to widowhood. The loss of a spouse, in addition to being emotionally devastating, can mean the loss of one's primary caregiver, social support, and financial resources (Martikainen & Valkonen, 1996; Smith & Zick, 1994). Widowhood may be followed by increased health service use and accompanying health conditions such as depression, limitations in activities of daily living, and fair or poor self-rated health (Bennett, 2006; Lillard & Panis, 1996). Further evidence suggests that widowhood has significant short-term negative effects on health, but not as much evidence has been found for long-term effects, and these effects tend to be stronger for men than women (K. Williams & Umberson, 2004).

For example, evidence from the Changing Lives of Older Couples Study, a prospective study of spousal bereavement, suggests that widowhood was a significant

predictor of depressive symptoms in both men and women age 65 and older. The effect of widowhood on mental health was dependent, however, on marital quality (Carr et al., 2000). For individuals who reported a higher level of dependence on their spouse, anxiety levels increased over the two waves of data, whereas for those who reported less dependence on their spouse, anxiety levels decreased. The results of this study also indicated that adjustment to widowhood was most difficult for those who responded that the quality of their marital relationship was high. Respondents who reported more conflict in their relationships had less difficulty making the adjustment to widowhood.

## MARITAL SATISFACTION

Although the evidence regarding the relationship between health and marriage applies to all life course stages, marital satisfaction within the marriage varies depending on life stage. Early years of marital relationships are associated with high satisfaction; marital satisfaction appears to decline in the middle years; and in later years, marital satisfaction rises again (Charles & Carstensen, 2002; Levenson, Carstensen, & Gottman, 1993; Orbuch, House, Mero, & Webster, 1996). There are two general explanations for the decline of satisfaction after the early years of marriage that focus on incompatibility and conflict and the presence of children. The median length of first marriages that end in divorce is 8.2 years for men and 7.9 years for women (Kreider, 2005). That is, roughly half of marriages that end in divorce half do so during the first 8 years. Moreover, conflict in general and controversy over children-related issues are typically higher in younger marriages than in older ones (Levenson et al., 1993). Older marriages, in general, are characterized by reduced conflict in conjunction with an increase in potential for pleasure, especially with respect to children. Researchers concluded that for middle-age couples, parenthood is a greater source of probable conflict than it is among older couples, for whom having children is a potentially greater source of pleasure, reflecting the fact that grown children typically place fewer demands on their parents than do young or adolescent children.

In addition, the early years of marriage often include high levels of both positive and negative experiences (Charles & Carstensen, 2002), whereas in the middle years, spouses describe fewer positive aspects but still high levels of conflict. Finally, in the later years, reports of conflict decline, whereas reports of positive aspects of marriage increase. Researchers emphasize that conflict over children is the driving force behind low satisfaction with marriage in the middle years but that other factors besides children leaving home influence satisfaction in the later years, such as conflict resolution, friendship, and selection.

First, increased length of marriage is associated with the development of better conflict resolution skills. One example of this using an observational system for coding emotional behavior is that older couples used expressions of affection along with expressions of discontent and disagreement during arguing, whereas younger couples used more negative expression (Carstensen, Gottman, & Levenson, 1995). Second, length of marriage is related to the tendency to cite "friendship" as an important characteristic of marriage (Charles & Carstensen, 2002). One study that examined perceptions of successful marriages reported that both men and women cited the same three criteria for what they perceived as the reason for the success of their marriage: commitment, liking their spouse, and having their best friend for a spouse (Lauer, Lauer, & Kerr, 1990). Finally, there is the argument that selection is an important part of the relationship between satisfaction and marriage in late life. For example, marriages that have a high degree of conflict often end in divorce. Orbuch et al. (1996) argued, however, that levels of satisfaction tend to rise after the period when most marriages end in divorce (satisfaction tends to rise after about 20 years according to some studies), whereas the median length of marriages that end in divorce is 8 years (Kreider, 2005).

Finally, there is very little research exploring the effects of race and ethnicity on marital satisfaction (Broman, 1993). Using nationally representative data, Broman found that Blacks were less likely to be satisfied with their marriages and less likely to feel that their marriages were harmonious. He argued that race variations in three factors may be responsible for this finding: spousal support, amount of household work, and financial satisfaction. He found that Blacks experienced lower spousal support and financial satisfaction. These effects, however, did not entirely account for the effect of race on marriage. In addition, the relationship between race and marital satisfaction was found for women only. Thus, Black women were less satisfied with their marriages than White women.

In conclusion, the picture of marriage in later life appears to be a relatively positive one. Although caregiving and widowhood are aspects of life that most older adults ultimately deal with, late-life marriage is a generally positive experience. Future research needs to examine older marriages among ethnic and racial minorities; this need is becoming increasingly important as minority groups, especially older Hispanics, are increasing both in number and proportion of the older population in the United States. Another important research direction is the use of longitudinal data to examine the connection between marriage and health over the life course. Studies are beginning to focus on short-term transitions into and out of marital states, and future analyses should continue to take advantage of longitudinal data to examine long-term effects of transitions. As the "institution" of marriage

continues to change and the U.S. population (especially baby boomers) begin reaching older ages, the availability of caregivers, or the caregiver pool, may diminish. This will have far-reaching effects on the system of informal and formal long-term care in the United States.

**SEE ALSO** Volume 2: *Cohabitation; Marriage; Remarriage;* Volume 3: *Caregiving; Sexual Activity, Later Life; Social Integration/Isolation, Later Life; Social Support, Later Life.*

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***M. Kristen Peek***

# MAYER, KARL ULRICH

***1945–***

Karl Ulrich Mayer, a German sociologist, has accomplished seminal work in linking life course research to analyses of institutions and social change. Mayer was born in Eybach, Germany. He received academic training in sociology and related subjects at the University of Tübingen; Gonzaga University (BA, 1966); Fordham University (MA, 1967); the University of Konstanz (Dr. rer. soc., 1973), and the University of Mannheim (Ph.D., with a thesis on habilitation, 1977). He held positions at the universities of Frankfurt and Mannheim, the National Survey Research Center (ZUMA), Nuffield College, Oxford, and various visiting professorships (e.g., at the European University Institute in Florence). Between 1983 and 2005, he was a director at the Max Planck Institute for Human Development in Berlin, heading the Center for Sociology and the Study of the Life Course. Since 2003 he has been a professor of sociology and, in addition, the director of the Center for Research on Inequalities and the Life Course (CIQLE) at Yale University—a responsibility he undertook in 2005.

From early on in his career, Mayer was interested in questions of social stratification and mobility. His interest in life course research developed out of his early empirical studies, including an analysis of the retrospective part of the 1971 German micro census, when he noticed the very different life chances of various birth cohorts. A pioneer of quantitative life course research in Germany, Mayer is probably best known for being the

***Karl–Ulrich Mayer.*** PHOTO COURTESY OF KARL ULRICH MAYER.

principal investigator of the German Life History Study (GLHS). This study, most of the time based at the Max Planck Institute for Human Development, lasted for more than 20 years and provides detailed retrospective information about the lives of 11,400 men and women born between 1919 and 1971. The data cover nearly the entire 20th century, and enable researchers to explore the long-term effects of events on later life at least for the older cohorts. The GLHS is probably the most comprehensive single data source on social conditions before, during, and after the division of Germany. The data can show how experiences in the German Democratic Republic and during the transformation after 1989 affected individual life courses; this topic has become a prominent part of Mayer's work.

The GLHS is based upon a conceptual framework Mayer has used throughout his research. It conceptualizes the life course as a succession of activities and events occurring in various domains of life from birth to death. The individual life course is seen as a multilevel process embedded in families and groups, featuring continuities between events earlier and later in the life course as well

as feedback effects of individual behavior on the macro level of society. A core element of this concept is the regulation of the life course by social institutions, most notably institutions of the welfare state. As a guideline for rigorous empirical research, Mayer views the life course not as an entity shaped by a grand normative structure but looks rather at sequences of specific life transitions that may be influenced by a variety of institutions.

Focusing on the later stages of the life course, Mayer was also co-principal investigator of the Berlin Aging Study (BASE), a multidisciplinary in-depth study of older adults aged 70 to more than 100 years who lived in former West Berlin. In the main study (1990–1993), a sample of more than 500 individuals was closely examined with regard to their mental and physical health, psychological functioning, and socioeconomic situation. The study has been continued as a longitudinal study.

Beyond the sociology of aging and the life course, Mayer's research has contributed profoundly to contemporary knowledge in the areas of social stratification, mobility, and the sociology of elites; social demography (though he has always opposed simple ideas of an unmediated impact of demographic changes on social life); occupational structures and labor market processes; and methods of survey research. He has been one of the rather few sociologists linking sophisticated individual-level research with macro-level social theory, and he has shown a constant interest in international comparisons. To date he has coauthored and edited about 30 books and has published more than 200 articles. From 1996 to 2004 he was coeditor of the *Kölner Zeitschrift für Soziologie und Sozialpsychologie*.

Following his theoretical interest in institutions, he has been concerned with questions of practical reforms of (higher) education and training, and he has been particularly successful in developing research infrastructure. He started the German General Social Survey, has built up close linkages between social science and official statistics, and has helped to found a number of prominent research institutions. He was also a member of the German Science Council. Mayer has been a member of a number of academies of science and has received academic awards such as the Distinguished Scholar Award from the American Sociological Association Section on Aging and the Life Course.

**SEE ALSO** Volume 2: *Individuation/Standardization Debate.*

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**Steffen Hillmert**

# MEDIA AND TECHNOLOGY USE, LATER LIFE

Computer-based technological developments in the latter part of the 20th century fundamentally altered the fabric of social and economic life and will likely continue to do so. The prime market segments for such technological innovations tend to be persons in the young and young adult stages of the life course. It is important to ask, therefore, how older persons have been affected by these technological developments, to examine how elders might participate in and benefit from new technologies, and to understand factors associated with technology adoption and use by the older population. Owing to the wide range of technological applications, the focus in this entry is on computer- and home-based information and communication technology, omitting areas such as assistive technology (considered elsewhere in this volume), technology in the workplace, and technological applications for vehicular transportation.

## MODES OF TECHNOLOGY USE

Developments in communication and information technology are having far-reaching implications for social interaction, social networks, and social support. E-mail, text and instant messaging, Voice over Internet Protocol (VoIP), two-way video communications, news groups, chat rooms, social networking sites (e.g., Facebook), and dating websites (e.g., Match.com) enable persons to initiate, maintain, or extend social relationships, unimpeded by constraints of geographical distance. The

***Teaching Internet to the Elders.*** *A junior at Standley Lake High School teaches a retiree to use the Internet during a class at the school in Westminster, CO. An innovative program spearheaded by EarthLink, an Internet service provider, brought the students and AARP members together.* AP IMAGES.

Internet is of particular relevance to older adults who wish to be in contact with dispersed networks of family and friends and for those who may be isolated because of mobility limitations. Research consistently shows that the primary way online elders use the Internet is for e-mail, including intergenerational communication with children and grandchildren (Fallows, 2004; Fox, 2004).

Internet-based communication also has special relevance to caregivers of older persons and others seeking social support. Online support groups enable caregivers to overcome barriers imposed by time and distance. Unlike face-to-face support groups, the asynchronous character of the communication does not require other network members to be immediately and concurrently available. Numerous online support groups exist, and research on the effects of participating in them suggests that such access is generally beneficial for caregiver well-being (Smyth & Kwon, 2004).

The Internet is especially well suited to information gathering, a process facilitated by the availability of powerful search engines. The value of this aspect of technology to the elderly is demonstrated by findings showing that information gathering is another major way they make use of the Internet. Prominent among the specific types of information sought is information about health, which is understandable given the higher prevalence of health problems at the latter stages of the life course (Fox, 2004, 2006).

By virtue of their flexibility, new technologies also have the potential to contribute to the intellectual enrichment of older persons. Distance learning courses offered via two-way interactive television and online courses open up educational opportunities for elders who may be unable to enroll in traditional courses. In the early 21st century, however, older adults were somewhat less likely than the general population to be enrolled in any form of adult education and lifelong learning courses, and only a very small proportion of persons 65 and older is enrolled in any type of online distance learning course (Cutler, 2006).

Existing and emerging technologies also have the capacity to collect information about the status of older persons on a real-time basis via monitoring and surveillance. Telehealth and telemedicine technology can monitor a person's condition and provide data to flag significant changes and initiate appropriate responses. Health status data collected in the home can be transmitted both to health care providers and to family or other informal caregivers, regardless of their physical proximity to the older person (Whitten, 2006). Similarly, efforts underway to develop "smart" houses are attempting to harness the power of technology to monitor conditions in the home environment, movement through the house, health status, needs for self-care, and wandering

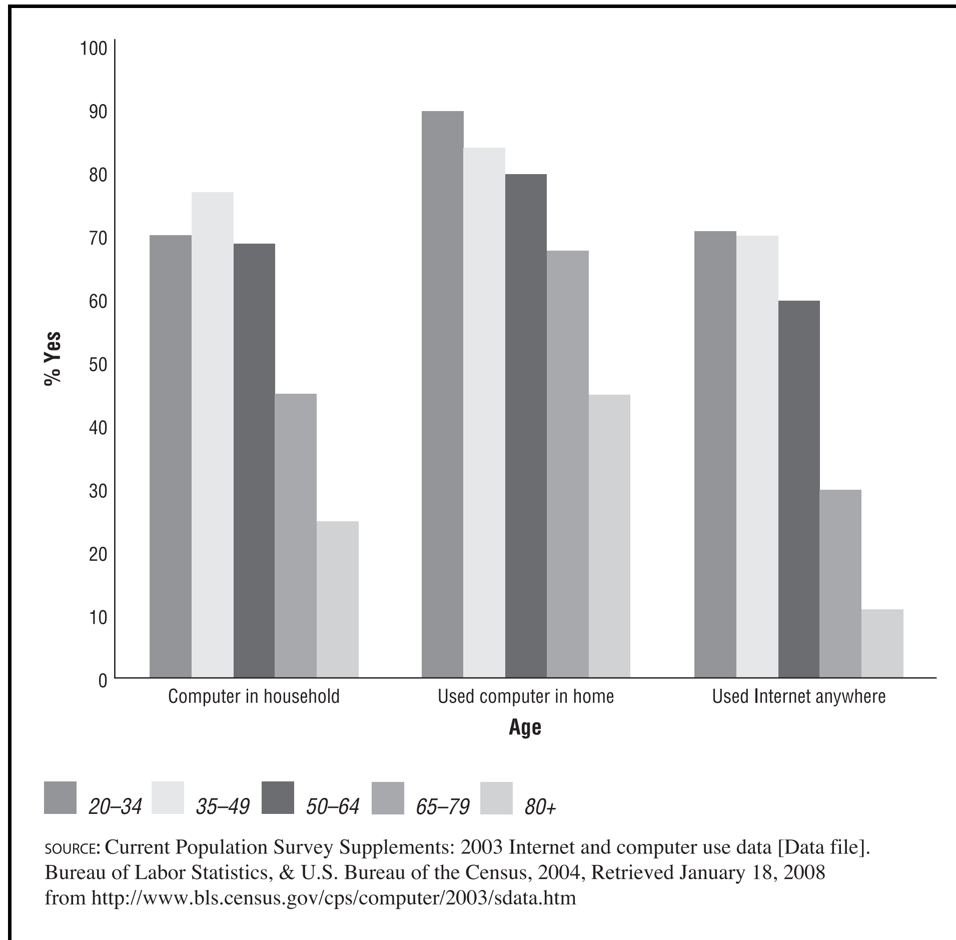


***Figure 1.*** *Computer access and Internet usage by age, 2003.* CENGAGE LEARNING, GALE.

from the home (Horgas & Abowd, 2004). These applications are particularly important because efforts to slow the rate of growth of health care costs have resulted in a shift in the locus of care from hospitals to home-based and other community-based settings.

Finally, forms of e-commerce range from the direct electronic deposit of checks to paying bills and conducting other financial transactions electronically to ordering goods and services over the Internet. Direct-deposit services benefit elders who may find it difficult to get to a bank because of functional or transportation limitations or who are concerned about the security of mailed checks or about their personal safety when going to a bank. Being able to shop for and purchase goods and services online has several advantages: It provides access for those with impaired mobility, shopping is not temporally limited, and there are no geographical constraints on the businesses that can be accessed. Because older people take longer to process information (Mayhorn, Rogers, & Fisk, 2004), online purchases may also present less time pressure than would the same transaction conducted in person or over the phone. As convenient as online commerce is, smaller percentages of older persons than of younger and middle-age persons currently make use of e-commerce, although such usage by elders is increasing (Fox, 2004).

## FACTORS IN THE USE OF TECHNOLOGY BY OLDER PERSONS

Older persons have traditionally tended to be late adopters of new technology (Horrigan, 2007; Rogers, 2003). For example, despite trends over time toward increasing computer and Internet use by older persons (U.S. Census Bureau, 2007, Table 1128), age differences persist. The data in Figure 1 show that older adults are less likely to live in households that have a computer, are less likely to have used the computer if there is one, and are far less likely to have made use of the Internet at any location (Bureau of Labor Statistics & U.S. Census Bureau,

2004). Attempts to determine if these access and usage differences can be accounted for by compositional factors associated with age (e.g., socioeconomic, demographic, and health differences) show that the age differences persist even after taking relevant variables into account (Cutler, Hendricks, & Guyer, 2003). Although computer and Internet use are prime examples of the negative relationship between age and technology use, similar age differences are evident for other modalities such as automatic teller machine (ATM) and cell phone use.

Research aimed at understanding the lower use of technology among older persons has considered several broad sets of factors (Cutler, 2006). Behavioral scientists have focused their efforts on problems with product design and instructions and with barriers erected by age-related decrements in cognitive, sensory, and motor functioning (Schieber, 2003). The role of social-psychological factors has been less systematically studied and is less well understood, but scattered evidence indicates that variables such as levels of interest, comfort, and control are associated with age differences in technology use. Expectations of others likely contribute to age differences, as ageist attitudes about the capabilities of older persons may foster reticence to try new technologies (Cutler, 2005). Finally, among older persons, socioeconomic and demographic variables have been shown to play a key and consistent role in explaining variation in access to and use of computers and the Internet: Availability and use tend to be lower among women and persons who are widowed, among persons with lower incomes and education levels, and among those who have one or more disabilities (Bureau of Labor Statistics & U.S. Census Bureau, 2004).

## THE FUTURE

Will age differences in technology use diminish in the future, or will they persist? Research has demonstrated that one of the most important factors in how attitudes shape technology use is experience. In school and in workplace settings, as well as at home, both the young and the middle aged will have had much greater exposure to computer-based information technology than current cohorts of older persons. The proliferation of cell phones and related communications technology and familiarity with automated systems such as ATMs among the young and middle-aged means that these and similar skills will be brought with them to their later years. Then, too, adopting and using new technology is related to socioeconomic factors. That future cohorts of older persons will have higher levels of educational attainment and perhaps greater levels of economic security also suggests that age differences in technology usage may diminish somewhat in coming years.

On the other hand, age-related changes in cognitive, sensory, and motor functioning need to be considered. The changing levels of performance that accompany normal aging may work against adoption and use of tomorrow's new, enhanced, and perhaps miniaturized but more complicated technologies, just as these changes have worked against use by older persons of early 21st-century technologies. Technological gadgetry and wizardry can also be expensive, beyond the financial reach of many elders, and perhaps less salient in their hierarchy of needs. For example, the potential benefits of smart houses are impressive, but more fundamental for some elders are basic housing issues of availability, affordability, and adequacy (Cutler & Hendricks, 2001). For older persons living on limited, fixed incomes, the fruits of technological change may prove to be inaccessible, thereby perpetuating the age-based "technological divide."

**SEE ALSO** Volume 3: *Assistive Technologies; Lifelong Learning; Social Integration/Isolation, Later Life; Time Use, Later Life.*

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## MEDICARE/MEDICAID

**SEE** Volume 2: *Policy, Health;* Volume 3: *Long-term Care.*

## MENTAL HEALTH, LATER LIFE

Consideration of mental health in a life course perspective is useful, as it helps place diverse forms of psychopathology into an important context. Most mental health problems tend to be initially diagnosed early in life, during adolescence or in young adulthood. It should be noted that the risk of first diagnosis of a mental illness declines with age. One exception, which follows a late onset and escalating trajectory, applies to the dementias, including Alzheimer's disease. A second psychological problem that escalates in late life among White males is suicidal thoughts and, ultimately, suicide itself.

Stressful life events may be expected to contribute to mental health problems. Older adults experience major normative stressors such as serious illness and social losses, including retirement and the death of loved ones. Nevertheless, they show great resilience in the face of these stressors and to threats of impending death.

The disciplinary orientations of researchers and clinicians play an important role in approaches taken to mental health and illness in late life. In terms of diagnosis and treatment of mental illness, psychiatric orientations emphasize the biological origins of these illnesses. Indeed, treatment of many, if not most, mental illnesses involves pharmaceutical intervention. There have been major advances in cognitive neuroscience that have helped elucidate the role of brain structure and function in psychopathology.

Psychologists tend to focus on the important interactions between environmental forces and biological susceptibility, in the development and manifestations of mental health problems. These are referred to as the diathesis stress theories of mental disorders. Developmental and social psychologists, as well as sociologists, have also focused on the stress process, whereby stress exposure may pose risks for mental illness, while coping resources and social supports may ameliorate the adverse effects of stressors on mental health. Indeed, research reveals that stressful life events can exacerbate existing psychological disorders, such as anxiety, depression, and *positive symptoms* of schizophrenia (e.g., auditory, visual, or olfactory hallucinations) (Holmes, 2006). Furthermore, social resources and supports can help diminish the number and intensity of symptoms in already existing psychiatric disorders.

Considering mental health within the life course perspective is useful because it helps to distinguish special challenges faced by older people living with chronic mental illness from those facing mental health problems for the first time in late life. These distinctions are often overlooked in the literature dealing with general mental health or on mental health at a particular life stage. Most instances of serious psychiatric disorders among older people reflect the aging of individuals with long-term psychiatric illness. In fact, some mental disorders of young adulthood tend to improve with age, such as positive symptom schizophrenia, anxiety disorders, and obsessive-compulsive disorders (Holmes, 2006). This may be due to changes, with aging, in the level of neurotransmitters and other brain processes. For example, an excess level of the neurotransmitter dopamine, responsible for positive symptoms of schizophrenia, declines with aging. Yet, one cannot rule out cohort differences in rates of diagnosis of various psychiatric disorders, because research is often reported based on cross-sectional studies. It should also be recognized that diagnostic criteria for mental disorders have evolved over time.

Abnormal psychology and psychiatry provide a vast array of diagnostic entities that apply to issues of mental health and aging. It is beyond the scope of this entry to review all of the disorders included in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*, also known as the DSM-IV, the official diagnostic manual of the American Psychiatric Association. Instead, this entry will focus on a selected number of disorders that include the more prevalent psychiatric disorders of late life, and will also provide a few illustrations of less frequent but notable disorders or clinical problems.

Accordingly, this review will include diagnostic criteria, etiology, course of illness, treatment, and management of selected mental health problems. The mental health problems and issues selected for inclusion in this entry are (a) common emotional problems in aging; (b) adjustment disorders; (c) mood disorders (depression, suicide, and mania); (d) dementias; (e) anxiety disorders; (f) post-traumatic stress disorder (PTSD); (g) mental health and resilience in late life; (h) treating mental illness through psychotherapy and pharmacotherapy; and (i) systems of caring for the mentally ill older population. This entry will also discuss the status of delivery of mental health services to the elderly. (The term *elderly* simply refers to individuals who are age 65 or older.) Current gerontological terminology designates persons ages 65 through 74 as the *young old* and those age 85 and older as the *oldest old*, while the 10-year age group between 75 and 84 constitutes an intermediate group between the young old and oldest old. In addition, those 100 years old and beyond are referred to as *centenarians*. These demarcations may change in the future as people live longer and healthier lives.

## COMMON EMOTIONAL PROBLEMS

Emotional problems associated with old age are generally related to experiences of stressful life events that are common during this stage in the life course. Such emotional problems include anger, sadness, helplessness, and loneliness, and may reflect the shared human experience of dealing with personal and social losses. These emotional states cause distress and discomfort, and may represent clear mental health problems of late life. To the extent that most of these emotional reactions generally resolve themselves over time, they are not considered as formal psychiatric diagnostic categories. However, when such negative emotions do persist and interfere with the older individual's functioning, they are designated as "adjustment reactions" in the DSM-IV.

In this section of the entry, there will be a brief review of some of the normative stressors of aging that are generally associated with the experience and manifestation of these emotional problems. These stressors include the death of a close family member or loved one, caregiving, and coping with life-threatening physical illness. In addition, traumatic stressors will be considered, including man-made and natural disasters, in a later section of the entry discussing PTSD.

**Death of Close Family Members** The loss of loved ones, including spouses, siblings, and even adult children, is part of the life experience of many elderly people. Widowhood may include a unique form of bereavement that affects the lifestyle, social position, and social support of older people (Lopata, 1996). Bereavement has been characterized in the mental health literature as including several stages, particularly when the death of a loved one is anticipated. In the latter instance, older adults are likely to exhibit *anticipatory grief reactions*. *Grief reaction*, which occurs shortly after the loss of a loved one, involves sadness and expression of negative emotions, including depressive ideation, loss of interest in enjoying life, restlessness, and sleep and appetite disturbances. In the aftermath of the individual's anniversary of death, grief reactions may also be manifested and are referred to as *anniversary reactions* (Butler et al., 1998).

Reactions to bereavement are often culturally shared expressions. Most religions have developed rituals, where the community can express social support for the person who is bereaved and show acceptance of their grief reactions. Such rituals often acknowledge that a period of time must elapse before the bereaved individual can return to normal social roles. In addition, members of the community also express their empathy and sharing of emotions. The inability to express one's grief could result in adverse psychological consequences. In addition to generating emotions of sadness, bereavement is also likely to lead to intense feelings of loneliness. This linkage between loss of one's social network, particularly in widowhood, and feelings of loneliness, has been confirmed both in U.S.-based and international studies. Similar findings have been reported based on the Finnish elderly (Jylhä, 2004) and among the Swedish aged population (Berg, Mellström, Persson, & Svanborg, 1981), indicating that the loss of a spouse is a significant contributor to loneliness.

**Caregiving** Another important example of stressful life situations that are likely to lead to emotional problems in late life is caregiving. Much of the extensive caregiving literature has focused on elderly spouses providing care to someone with Alzheimer's disease or other debilitating conditions (Zarit & Zarit, 2007). Such elderly caregivers are simultaneously coping with the loss of companionship and social support from the person for whom they are caring, and the intense physical and psychological demands of caregiving. Just as sadness and loneliness are prevalent emotions among the bereaved, elderly caregivers often experience anger and helplessness as they confront role strain and the inevitable decline that they are witnessing in their loved one. Many elderly caregivers must simultaneously confront their own frailty and personal losses, even as they are attempting to cope with the illness of a close family member. Effective strategies, such as marshaling support and instrumental coping to meet challenges head-on, have been found to diminish the adverse mental health consequences of caregiving stress. There are notable cultural influences on stressors associated with caregiving and the emotional responses to the caregiving

experience. Norms of obligation differ internationally, and available social supports to the elderly caregiver are also shaped by cultural context. For example, Japanese caregivers had traditionally been expected to care for their elders at home; but with growing industrialization, they now face difficult choices that include institutionalizing elders, with resultant feelings of guilt, sadness, and even anger (Young, McCormick, & Vitaliano, 2002).

**Facing Life-Threatening Illness** In addition to well-recognized problems posed by caregiving to the elderly, being a recipient of care presents its own challenges. Older adults suffering from life-threatening or disabling illness confront personal losses and stigma. This is in addition to engaging in adaptive tasks of ensuring that they receive responsive and adequate care from formal, as well as informal, caregivers. The disability cascade represents a sequence of events leading from chronic illness (e.g., severe arthritis), to physical impairment (e.g., pain), to functional limitations and disability (e.g., mobility problems) that alter the lives of many older adults. As the elderly confront these illness-related losses, and are no longer able to independently perform activities of daily living, they frequently experience emotions of sadness, helplessness, loss of control and self-efficacy, and diminished self-esteem. The need to give up valued social roles and activities also elicit negative emotions, both when it is due to physical illness and when it is based on environmental or societal displacement of the elderly, as may occur through involuntary retirement.

## ADJUSTMENT DISORDERS

Adjustment disorders of late life refer to time-limited, but often severe, maladaptive reactions to stressful life events. Adverse psychological responses may include depression, anxiety, fearfulness, physically or verbally acting out, or destructive behaviors. To the extent that the stressful life situation (e.g., acute physical illness, problems with family members) may resolve itself, symptoms that are reactions to the stressor are also more likely to dissipate. However, for some older adults, reactions continue, and symptoms initially diagnosed as adjustment reactions may be reclassified as a chronic mental disorder. Where the stressful event has permanent consequences, such as amputation for a diabetic patient, or the death of one's spouse, individuals exhibiting initial adjustment disorders are likely to gradually develop new coping skills, which eventually result in improved psychological functioning.

Older adults requiring institutional placement, particularly in nursing homes, often exhibit psychological distress or behavioral symptoms that are diagnosed as an adjustment disorder, or perhaps more accurately, as an adjustment reaction. Among elderly patients in hospitals, who are referred for psychiatric diagnosis and treatment, approximately 20% are diagnosed with adjustment disorders. It is notable that patients exhibiting cognitive impairment seldom receive this diagnosis, based on their assumed chronic and irreversible brain pathology. Such patients are generally not expected to overcome stress-induced psychological problems. Adjustment disorders are ultimately confirmed by their transitory nature. Longitudinal research in 2008 profiling community-dwelling older persons offers evidence that recent stressors, occurring during the past year, are most likely to trigger depressive symptoms. It is notable, however, that an accumulation of negative life events over a 4-year period also contributed to depressive symptoms.

Research on stressful life events, such as widowhood, suggests that strong initial grief reactions, anxiety, and depressive symptoms generally dissipate within a 1-year period, with most older adults returning to their prior levels of psychological well-being (Wilcox et al., 2003). Criteria for diagnosis of adjustment disorders, according to the DSM-IV, include an identifiable stressor antecedent to the symptoms, a determination that a patient's response exceeds the *usual* responses to such stressors, and significant impairments in the patient's ability to function. Additional specific criteria that are listed in the DSM-IV manual require that the stress-related disturbance does not meet the criteria of schizophrenia or mania, personality disorder (such as schizoid, avoidant, or dependent personality disorders), or symptoms of bereavement, and that once the stressor has terminated, the symptoms subside within 6 months.

Among older adults, medical illness and hospitalization are among the most common stressors related to a diagnosis of adjustment disorders. It is notable that patients who develop adjustment disorders frequently have prior symptomatology or a history of mental health problems (Lantz, 2006).

Psychotherapy is considered the treatment of choice for adjustment disorders. However, few older patients are actually referred for psychotherapy (Butler et al., 1998). Furthermore, those who are referred often choose not to go for treatment. Studies show that brief goal-directed therapy as well as cognitive behavioral therapy (CBT) are effective in easing adjustment disorders (Lantz, 2006). However, these data are based primarily on older adults suffering from depressive symptoms. Few of the older adults in these studies had isolated diagnoses of adjustment disorders.

Adjustment disorders are typically expected to resolve within a 6-month period, with some improvement anticipated after 3 months. Those with poor resolution are likely to have experienced multiple or extreme stressors while also having limited social supports. In

terms of extreme adverse reactions, suicide attempts have been reported (Smyer & Qualls, 1999). At the same time, there is growing evidence of resilience in late life. Studies of older persons dealing with highly stressful events, such as a cancer diagnosis (Bergeman & Wallace, 1999) and long-term cancer survivorship (Deimling, Kahana, Bowman, & Schaefer, 2002), reveal that many can retain their earlier levels of psychological well-being.

### MOOD DISORDERS: DEPRESSION, SUICIDE, AND MANIA

Depression in old age bears many similarities to depression diagnosed early in life, but it also has several distinctive characteristics and thus may present challenges for accurate diagnosis. Depression is recognized as the most frequent psychiatric diagnosis in old age. Nevertheless, in a life course perspective, it is notable that depression is also the most frequent diagnosis of mental health problems in younger age groups. In fact, depression rates are lower in old age than at other points during the adult life course. Thus, prevalence rates for depression are highest in midlife, with women portraying significantly higher rates of depression than do their male counterparts (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993). At older ages, depression rates are lower and gender differences also become less marked, although women continue, at all life stages, to report greater depressive symptomatology than men, as shown in cross-sectional studies.

Typically, late-life depression is initially diagnosed in a primary care setting. Recognizing symptoms of depression and referral of patients for more specialized care presents special challenges. Symptoms of depression are often difficult to distinguish from symptoms of cognitive impairment, on the one hand, and from symptoms of physical illness, such as fatigue, on the other. Among the elderly, both somatic symptoms of depression (disturbances in eating, sleeping, and libido) and problems in memory and cognition are frequently observed, and may be reflecting underlying physical illness, reactions to stressful life events, or early-stage dementia.

Depression is a complex disorder with diagnostic classifications dependent on the number of symptoms, their duration, and severity. Severe cases of clinical depression may also include suicidal ideation and psychotic features such as hallucinations or delusions. According to the DSM-IV, a diagnosis of major depressive disorder requires the presence of depressed mood, or inability to derive pleasure in life, lasting for a minimum of 2 weeks. Furthermore, four additional symptoms of depression from among a specific list of nine categories must also be present. The DSM-IV also attempts to rule out symptoms that may be due to the direct physiological effects of substance abuse, of medication, or of a general medical condition. It also differentiates between major depression and symptoms of bereavement, after the loss of a loved one. Additional criteria for arriving at a diagnosis of depression are listed in the DSM-IV.

There are numerous categorizations in the DSM-IV that are relevant to depressive disorders in later life. Mild symptom clusters are referred to as elevations in depressive symptomatology. Such elevations are regularly observed in research on socially disadvantaged groups and are often the result of stressful life events. They are often measured based on responses to the Center for Epidemiological Studies depression scale (CES-D), a scale that is commonly used in sample surveys to assess depressive symptoms among community-dwelling adults (Radloff, 1977). The DSM-IV clinical classification for mild forms of depression is called *dysthymia*, which affects 2% of elderly adults.

Clinically significant depression is generally diagnosed as *major depressive disorder*. This may be manifested in a single episode or in recurrent episodes of clinical depression. Additionally, manic-depressive or bipolar disorder may be diagnosed when there are alternating episodes of mania and depression. A milder version of bipolar disorder is referred to as *cyclothymia*, when individuals cycle between sadness and lethargy, on the one hand, and spells of energy and euphoria on the other. However, the magnitude of alternating depression and mania are more muted in cyclothymia. Depression may also coexist with other psychiatric disorders. These include anxiety disorders, obsessive-compulsive disorder, PTSD, schizophrenia, and hypochondria (Holmes, 2006). There are additional descriptions in the DSM-IV of specific reactions among the elderly. These were described earlier as anticipatory grief, grief reactions, and anniversary reactions (associated with the death of a loved one). Diagnosis of depression in these cases is often a matter of severity of symptoms. When symptoms resolve in a relatively short period, the mental health problem may be designated as an adjustment reaction.

Depression is the most frequently identified and most extensively studied mental health problem among older adults. About 2% of older adults have suffered from a major depressive disorder (Beekman et al., 1995). However, clinically significant symptoms of depression, which do not reach the criterion for a diagnosis of major depressive disorder, occur much more frequently. About 15% of community-dwelling elderly persons and 40% of elderly persons living in long-term care facilities manifest such problems (Gatz, 2000). Furthermore, suicide, which is considered one of the ultimate adverse outcomes of depression, also tends to increase with age, particularly among

White males (McIntosh, Santos, Hubbard, & Overholser, 1994).

Risk factors for depression are multidimensional. Focusing on biological etiology, neurotransmitter deficiency (insufficient serotonin and norepinephrine) has been viewed as a key cause of depressive problems. Genetic predispositions clearly play a role in both brain structure and function. Additional evidence for risk factors is based on the strong association of late-life depressive episodes with prior history of depression, major or minor. Cerebrovascular disease has also been associated with late-life depressive episodes. Individuals who have had strokes in the left prefrontal area of the brain are more likely to develop depressive symptoms than are people who had other forms of brain disease (Alexopoulos et al., 1997). Additionally, environmental factors, such as loss of a loved one or burdensome caregiving responsibilities, which represent stressful late-life situations, have also been linked to depressive symptomatology (Bodnar & Kiecolt-Glaser, 1994). Studies have also shown that individuals of lower socioeconomic status are more likely to develop depression (Fiske & Jones, 2005). This association suggests that stress exposure associated with limited economic resources could contribute to the development of depression.

## DEMENTIA

Dementias represent highly prevalent mental health problems in late life. They involve gradual and progressive decline in memory and cognition to the point where individuals are unable to cope with their environment (Youngjohn & Crook, 1996). The dementias include a variety of neurodegenerative diseases such as Alzheimer's disease, vascular dementia, Pick's disease, later stages of Parkinson's disease, Huntington's disease, and others. Alzheimer's disease is the most prevalent of these conditions. Depressive symptoms have been consistently found to contribute to cognitive impairment, which needs to be distinguished from dementia, because the former (depression) is reversible (Jorm, 2000). Conversely, older persons can react to cognitive decline with feelings of depression.

## ANXIETY DISORDERS

Anxiety has been found, in epidemiological studies, to decline with age (Kessler et al., 1994). Nevertheless, varying levels of anxiety present major mental health problems for large numbers of elderly persons. Given that older adults endure normative stressors of chronic illness, disability, and social losses, it is understandable that emotions reflecting worry, agitation, arousal, or fear would frequently accompany stressful life situations. Anxiety experienced in late life is often associated with other negative emotions, including loneliness and depression. Furthermore, anxious elderly persons are likely to report poorer health and more activity limitations (de Beurs et al., 1999). It is important to note that, in addition to psychological manifestations, there are strong physiological components to anxiety. Arousal and anxiety can be brought about by a biochemical imbalance in the brain (i.e., insufficient GABA), even in the absence of stressful life events (Holmes, 2006).

Experiences and expressions of anxiety on a temporary basis, in response to stressful life situations, are common. However, the experience of anxiety in the absence of environmental triggers, or the continuing experience of anxiety after the triggers are no longer present, are classified as anxiety disorders by the DSM-IV. There has been considerable controversy in establishing whether such anxiety disorders increase or decrease in old age (Lauderdale, Kelly, & Sheikh, 2006). There are indications from research showing that rates of anxiety disorders do not, in fact, increase with age (Manela, Katona, & Livingston, 1996). These findings may reflect the development of resilience in the elderly, based on a lifetime of learning to cope with numerous stressful life situations. It should be noted that epidemiological studies differ widely in their estimates of anxiety disorders in late life, particularly based on the criteria used for establishing prevalence rates (e.g., 1 month, 6 months, or 12 months). Longitudinal studies of the same individuals over time are few, as compared to cross-sectional studies. This leaves an open question as to whether anxiety changes within the same individuals over time, or whether cohort effects are being observed.

Classification of anxiety disorders in the clinical literature and the DSM-IV encompasses a broad spectrum of mental health problems. These problems include (a) generalized anxiety disorder (GAD); (b) phobic disorders; (c) panic disorders; (d) acute stress disorders; (e) obsessive-compulsive disorders; and (f) PTSD.

GAD is characterized by hyperarousal within the individual (e.g., elevated heartbeat, respiration, and other symptoms) and involves excessive worry and anxiety that persists most of the time, for at least a 6-month period. Symptoms include restlessness, irritability, difficulty concentrating, and sleep difficulties. Typically there is no clear trigger for the anxiety. Worries may center on problems that might occur in the future. Studies indicate that symptoms of this disorder most commonly occur in young adulthood (Holmes, 2006). It is notable that GAD in older adults is characterized by a chronic course, with most of those treated for this problem having manifested symptoms earlier in their lives (Blazer, George, & Hughes, 1991).

Phobias refer to irrational fears of specific objects or social situations that interfere with an individual's ability

to function effectively in their environment. Such irrational fears are relatively common in the general population, with estimates of up to 10% of the population experiencing some type of phobia at any one time. Phobias of spiders, elevators, air travel, and of social situations are particularly common, with women reporting more frequent instances of phobias than their male counterparts (Hollander & Simeon, 2004). Phobias interfere with daily functioning, because those suffering from them tend to avoid situations where they might encounter the object of their fears. Consequently, they never adjust to the feared object. Prevalence of phobias is slightly less frequent among older adults than among younger age groups. Nevertheless, on an absolute basis, phobias are relatively common problems in late life as well as in earlier points in the life course. Types of phobias reported by older adults do not differ significantly from those reported by younger age groups. However, on some occasions, what appears to be a phobia in a young adult, such as getting onto a bus, constitutes a justifiable concern for an older person who has difficulty in ambulation or climbing steps.

### POST-TRAUMATIC STRESS DISORDER (PTSD)

Unlike GADs, where there is often an unknown origin for the symptoms, PTSD represents a form of anxiety disorder where there is a clear and identifiable origin (Dohrenwend, 1998). Symptoms in this case are found in the aftermath of major natural or man-made disasters, such as earthquakes and wars, or extreme personal trauma, such as a rape or other forms of abuse. Subsequent to experiencing personal or social catastrophes, distress represents a normal response to abnormal situations. Symptoms of PTSD often linger on, even in the long-term aftermath of the original trauma, when threats are no longer present. In considering PTSD in a life course perspective, two major categories become relevant. One set of problems is encountered among those older adults who are exposed to traumatic situations such as wars or natural disasters in late life. A second category is noted, where persons suffered traumatic stress exposure earlier in life. These latter individuals may exhibit long-term, renewed, or new psychological symptoms as they encounter old age.

There are three symptom clusters necessary for the diagnosis of PTSD in the aftermath of a traumatic event. These include intrusiveness, avoidance, and hyperarousal. These symptoms have to persist for at least 1 month's duration. PTSD is further categorized as acute (less than a 3 month duration), chronic (3 months or longer), or delayed onset (where trauma-related symptoms appear at least 6 months after the traumatic event). Intrusiveness is exemplified by nightmares, and daytime intrusive thoughts that are reminiscent of the trauma. Avoidance or numbing refer to a tendency to avoid facing anything related to the traumatic event and feeling numb when forced to face it. Hyperarousal is manifested in excessive vigilance to events and objects that could possibly or remotely pose a threat.

The majority of research dealing with late-life trauma exposure has focused on natural disasters, including floods, earthquakes, hurricanes, tornadoes, and volcanic eruptions. Many of these studies have been conducted outside of the United States (Liu et al., 2006; Armenian et al., 2000). These studies typically involve only short-term follow-ups and suggest remarkable resilience on the part of elderly trauma victims, particularly where social supports are available. Thus, older survivors of the 1988 Armenian earthquake reported less intrusiveness, but more symptoms of hyperarousal, relative to younger survivors (Goenjian et al., 1994). Notably, the overall severity of PTSD in this sample did not differ by age, illustrating the resilience of older adults.

Examples of PTSD in late life, based on having experienced trauma earlier in life, typically derive from community surveys of older persons who had lived through wartime trauma. Such studies have focused on elderly survivors of the Holocaust (Kahana, Harel, & Kahana, 2005) and on elderly war veterans, including survivors of Pearl Harbor (Wilson, Harel, & Kahana, 1988). The Pearl Harbor study showed a decline in PTSD symptoms over time, since the trauma. Other studies were done on soldiers who had experienced wartime captivity (Dikel, Engdahl, & Eberly, 2005). Among those individuals, substantial numbers continue to manifest PTSD, even in the long-term aftermath of the original trauma. Others have shown healing after their initial experience of PTSD, but symptoms may have reemerged when they encountered negative life events of old age that served as reminders of the earlier trauma or of personal vulnerability (Kuch & Cox, 1992). Thus, one can discern several life course trajectories that this disorder may take, in the aftermath of the traumatic event. The extent of trauma exposure appears to be related to the likelihood of exhibiting symptoms of PTSD later in life (Yehuda, Southwick, Giller, Ma, & Mason, 1992). This finding has been observed both in studies of Holocaust survivors and with war veterans.

Focus on traumatic events that happened to older adults in the United States relates primarily to victims of crime. Among elderly individuals seeking treatment after criminal victimization, about one-third reported symptoms of PTSD (Gray & Acierno, 2002). It is important

to note, however, that clinical populations who present for treatment are more likely to consist of individuals experiencing significant symptoms than are nonclinical samples of community-dwelling crime victims.

In considering life course trajectories of PTSD, one can discuss four typologies: (a) the *resilient* survivor, who feels strong and powerful after coping with and surviving the traumatic experience; (b) the *untainted* survivor, where the individual simply goes on with life and tries to leave the past behind; (c) the *conditionally vulnerable* survivor who adapts well, but after facing new threats, reacts with a flare-up of PTSD symptoms; and (d) the *vulnerable* survivor, who has an almost life-long history of PTSD subsequent to the original trauma (Kahana, Harel, & Kahana, 2005). The existence of these subgroups may help researchers understand why clinicians often report long-lasting effects or exacerbation of PTSD symptoms with aging, whereas community-based studies tent to show either no increase or an actual decline in PTSD symptoms over the life course (Wilson, Harel, & Kahana, 1988).

## MENTAL HEALTH AND RESILIENCE IN LATE LIFE

In considering the mental health of the elderly, the resilience and adaptability of this group deserves attention. Older adults are likely to experience diverse normative stressors, presented by chronic illness and disability. In addition, with increasing life expectancy, there is also an increasing incidence of social losses. These may reflect deaths of friends and family of the same generation and even loss of adult children. Relocation of longtime friends and neighbors constitutes yet another set of losses. Although the number of reported life events declines with aging, the magnitude of events likely to be experienced by older adults presents threats to the self and to one's identity (Thoits, 1991). In addition, stressors of late life may be superimposed on trauma, which older adults might have experienced earlier in their lives. Thus, many of the oldest old the early 21st century may have lived though the Great Depression (1929–1939), World War II (1939–1945), and the immigrant experience.

Considering the accumulation of stressors in late life and threats of impending mortality, older adults generally exhibit good mental health. Studies of community-based samples of older adults reveal relatively low rates of mental health problems (Smyer & Qualls, 1999). These comparisons are likely to reflect cohort differences in coping with stressful life situations. The research of the authors of this entry has explored late-life adaptation of those elderly who had experienced major trauma early in life. In a study comparing psychological well-being of survivors of the Nazi Holocaust with other immigrants to the United States, the authors found that 40 years after experiencing trauma, survivors portrayed signs of both stress and resilience (Kahana, Harel, & Kahana, 2005). Survivors exhibited somewhat more sleep disturbances and somewhat lower morale than did their less traumatized counterparts (i.e., the other immigrants). However, they also showed a high level of social functioning, community involvement, marital stability, and they raised highly achieving children. These findings fit well with the focus of the psychological literature on resilience in late life (Glantz & Johnson, 1999). In a recent set of studies completed in 2008, the authors of this entry have considered the mental health of elderly survivors of three prevalent cancers (prostate, breast, and colorectal). This research revealed that whereas worries about one's future persist, many survivors consider cancer to be a life-changing experience. Rates of depression are not highly elevated in this group, and there is also evidence of posttraumatic growth and transformation associated with the experience of cancer survivorship.

The authors' research has also focused on considering the impact of increasing frailty, and of stressful life events, among community-dwelling older adults who participated in our long-term panel study. Respondents in the study exhibited good mental health, and high levels of social engagement and health promotion (Kahana, Lawrence, Kahana, Kercher, Wisniewski, Stoller et al., 2002). Proactive adaptations include exercise, planning ahead, and helping others. These adaptations were found to enhance psychological well-being, notwithstanding the normative stressors of aging. The findings of this research, comparing urban White with urban African-American elderly, did not reveal significant differences in the mental health of these groups (Kahana et al., 1999).

## TREATING MENTAL ILLNESS AND PSYCHOLOGICAL DISORDERS IN LATE LIFE

In considering approaches to treating diverse mental health problems in late life, psychotherapy and pharmacotherapy are two major approaches documented in the scientific literature. Environmental interventions will also be noted in the concluding section of this entry, as the broader societal approaches to caring for the mentally ill are discussed.

**Psychotherapy** Older persons can benefit from diverse forms of psychotherapy, as is the case with younger persons. Therapies typically employed with older persons include CBT, interpersonal therapies, and group therapy. A careful review of advances in psychotherapy with older adults has been provided by Patricia Arean (2003). These therapies are also utilized with younger people. In addition, *reminiscence and life review* therapy has been utilized

with older adults (Butler et al., 1998). The basic therapeutic process is similar for both younger and older people, assuming there are no major cognitive impairments among the older patients. However, the life issues discussed will be different for the old versus the young, with older people more apt to discuss illness, physical disability, death and dying, and bereavement. Nevertheless, even here, similarities are shared with the old and the young, such as interpersonal relationships, family issues, assertiveness issues, and competent coping techniques.

A potential problem facing psychotherapists is their lack of experience in dealing with elderly patients. Younger therapists may not be attuned to later-in-life issues that confront older people. Many clinical training programs do not focus sufficiently on the elderly; as a result, seeing an older patient in therapy is often a new experience for many young therapists. Offering mental health professionals courses in gerontology, clinical geropsychology, and internship experiences working with the elderly can help remedy this situation. A number of graduate programs are now providing such training.

Early views regarding psychotherapy with the elderly were pessimistic. Sigmund Freud (1856–1939) felt that individuals over the age of 50 were unsuitable for his form of therapy (i.e., psychoanalysis). However, as the field moved forward from psychodynamic orientations to newer forms of behavioral therapies, there has been an upsurge of interest in the applications of these newer therapies to the elderly. In the clinical psychology literature, success has been reported in applying behavioral therapies to older persons suffering from depressive disorders (Gallagher & Thompson, 1982). The effectiveness of behavioral techniques in treating agitation has also been documented (Newton & Lazarus, 1992). In dealing with adjustment disorders, brief psychotherapy has been successfully implemented (Horowitz & Kaltreider, 1980).

**Pharmacotherapy** When recurrent symptoms of psychological distress cannot be alleviated by psychotherapy, older patients can benefit from the use of psychotropic drugs. Such drugs are commonly prescribed for older persons suffering from agitation, depression, mania, other psychotic disorders, dementia, anxiety, and sleep disorders. In general the same class of drugs is prescribed for older patients as for younger ones, depending on the psychiatric disorder (e.g., benzodiazepines, such as Valium, for both younger and older patients suffering from anxiety). However, most of the research on the effects of drugs has been conducted on younger adults who do not suffer from various medical conditions associated with aging and who are, therefore, not on medications for these conditions. Consequently, there is insufficient information on side effects or on dosage regulation for older adults. Many clinical trials testing new drugs exclude elderly individuals. Because comorbid illnesses are prevalent among older adults, a careful review of the patient's medical history and medications is necessary before prescribing psychotropic drugs, thereby preventing possible drug interaction effects.

Clinicians should also note that older persons have greater sensitivities to psychotropic drugs and should generally be given lower dosages than for younger patients, to avoid possible toxicities. More specifically, the medications need to be more accurately calibrated in older adults to insure optimal effectiveness. Concerns have been expressed about compliance in the use of medication among older adults (Avorn, 1988). Efforts to correct this problem include the use of pill boxes that alert the patient regarding which pills have to be taken and when. Having noted caution applying to medication use by older adults, it is important to also acknowledge documented benefits of mixed therapies that use both psychotherapy and drug therapy in treating mental health problems among the aged (Pampallona et al., 2004).

Having provided a general review of psychotherapy and pharmacotherapy with older adults, this entry now turns to discussing the treatment of prevalent mental health problems in late life, recognizing that treatment often involves a combination of psychotherapeutic and pharmacological modalities. Treatment of depression, GADs, and dementia are discussed below.

**Depression** Treatment of depression involves both psychotherapeutic interventions and pharmacotherapy. Regarding mild and moderate depression, psychotherapy appears to be the treatment of choice. Research supports the effectiveness of cognitive behavioral therapy (CBT), group therapy, and other brief therapeutic efforts (Laidlaw, Thompson, & Gallagher-Thompson, 2004). Additionally, social interventions aimed at reducing stress and enhancing social supports for elders facing serious illness, caregiving responsibilities for an ill spouse, or bereavement, can reduce the risk for developing depression. Religious and spiritual support have also been found to reduce depressive symptoms in the face of stressors (Boswell, Kahana, & Dilworth-Anderson, 2006). In more severe cases of depression, the use of drug therapy has become standard (Salzman, 1998). When depression is accompanied by suicidal thoughts, electroconvulsive therapy (ECT) is utilized, to bring about a quick remission. ECT is safe and has been effectively used with elderly patients suffering from depression. Reversible side effects of this treatment include temporary memory loss. Transcranial magnetic stimulation (TMS) has also been added as a promising intervention for depression in late life (Holmes, 2006).

Preventive efforts to reduce the incidence of future depressive episodes have focused on monitoring patients with prior histories of depression, and engaging them in various stress reduction efforts. Early recognition of adverse reactions to serious medical illness episodes can be useful in forestalling more severe consequences of illness. Primary care physicians can play an important role in the recognition and early treatment of depressive symptoms among older adults, because they are the first professionals to treat older adults. It has been suggested that offering mental health services in primary care settings can enhance access of elderly members and minorities to mental health care (Ayalon, Areán, Linkins, Lynch, & Estes, 2007).

**Generalized Anxiety Disorders** Both similar and different issues for those dealing with depression arise in the treatment and management of GADs. Treatment of these conditions typically involves collaborative care by physicians and psychologists, including pharmaceutical and psychotherapeutic interventions. Among psychotherapeutic interventions, CBT is most frequently used. It is recommended that modifications for use with older adults also be implemented. These modifications may account for age-associated memory changes (Babcock, Laguna, Laguna, & Urusky, 2000). Based on concerns about side effects of medications, psychopharmacological interventions have not been recommended as the initial therapy of choice. With regard to treatment of phobias, CBT has been found to be effective. Desensitization therapy is particularly effective, and involves gradual exposure to the feared object (Barlow & Brown, 1996).

**Dementia** Regarding treatment of the dementias, there is a lack of consensus about techniques that can be successfully utilized. One technique that has been used since the 1960s is *reality orientation therapy*, which helps the patient become better attuned to what is happening in their environment, to learn about the daily news, and to improve cognitive skills that have declined. An alternative approach, which became popular in the 1970s, is *validation fantasy therapy*, which gives comfort to older dementia patients by empathizing with them and validating their feelings. Currently, more precise memory and cognitive retraining programs are being conducted with both dementia patients (Malone & Camp, 2007) and with community-dwelling older adults, who would like to improve their memory and cognition (Small, LaRue, Komo, & Kaplan, 1997). Self-help books on this topic are currently popular in bookstores. There have also been extensive efforts to treat symptoms of dementia with environmental interventions (Regnier & Pynoos, 1992). Group psychotherapy has also been used successfully for some time with older patients who have mild dementia.

## CARING FOR MENTALLY ILL OLDER ADULTS

Even as resilience and mental health are recognized in late life, one cannot lose sight of the severe problems faced by those who do suffer from mental illness. With the rapid growth of the elderly population in the United States and worldwide, the sheer number of older adults needing mental health services will grow.

Since the 1960s to 1970s, there has been a major movement to deinstitutionalize severely mentally ill individuals (Brown, 1985). Consequently, most older individuals suffering from a mental illness are now living in the community. Unfortunately, the promise of the community mental health movement has not been fulfilled. Only about half of those old persons with severe psychiatric disorders are receiving any mental health services (George, 1992). Some older adults with mental illness, and those suffering from dementia or Alzheimer's disease, are generally being cared for in nursing homes. The quality of care in nursing homes has been widely criticized, and few facilities enable residents to utilize expert mental health services (Smyer, Shea, & Streit, 1994).

The Nursing Home Reform Act of 1987 reflects an effort by Congress to improve the quality of care in nursing homes through regulatory reform. Part of the implementation of this plan relates to screening older patients prior to admission, with the goal of offering admission primarily to patients with dementia, and screening out those who do not have dementia, but who suffer from other forms of mental illness. An important goal of the Nursing Home Reform Act also relates to reducing or eliminating inappropriate treatments, including chemical and physical restraints in nursing homes. This concern has been warranted, as studies demonstrate that some individuals living in nursing homes have received antipsychotic medication even though they did not have a diagnosis of mental illness (Spore, Smyer, & Cohen, 1991). By contrast, substantial portions of other patients who did have a diagnosis of mental illness did not receive medications.

The undertreatment of mental disorders in late life partly reflects the fragmentation of services, along with some reluctance by mentally ill older adults and their caregivers to utilize available services. This underutilization of mental health services may be due to perceived stigma associated with mental illness, particularly among today's older cohorts.

For older adults who are suffering from late-onset mental health problems and are not long-term psychiatrically ill persons, primary care physicians serve most often as mental health service providers. This raises problems about adequate differential diagnosis and referral for

psychotherapy. Questions have also been raised about the level of expertise of primary care physicians in prescribing psychotropic medications. Currently, few studies document the mental health service use trajectories of older adults suffering from different forms of mental illness.

In developing an agenda for improved mental health services for older adults, there are several promising avenues toward progress. However, implementation of both proven and innovative services has been slow. Community-based mental health outreach services that identify isolated older adults with mental illness have shown promise but are not widely used. Environmental interventions for cognitively impaired older adults are more extensively used, but still reach only a relatively small segment of elders who can benefit from it.

Part of the challenge toward improving mental health care in later life relates to enhanced training of mental health professionals. Well-trained professionals from different disciplines are needed to serve a growing population of diverse older adults with a wide variety of mental health problems. Research advances can also lead to improvements in the lives of older mentally ill persons. Such research can offer evidence-based guidelines for the best practices in the treatment for those with mental illness.

**SEE ALSO** Volume 2: *Trauma;* Volume 3: *Caregiving; Chronic Illness, Adulthood and Later Life; Cognitive Functioning and Decline; Dementias; Loneliness, Later Life; Quality of Life; Stress in Later Life; Suicide, Later Life; Widowhood.*

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*Boaz Kahana*
*Eva Kahana*

## MOEN, PHYLLIS
### *1942–*

Phyllis Moen is an internationally recognized life-course scholar of work, family, aging, and gender. Born in Hazelhurst, Georgia, her path to the academy was unconventional and informed her later interests in the role of timing and the interplay between work and family as key factors shaping the life course. Married at age 18 and the mother of two young children by age 20, she completed correspondence and night courses to earn her bachelor's degree while living on a small farm in Crookston, Minnesota. She was widowed unexpectedly at age 35 and had to raise her children as a single parent. She completed her Ph.D. in 1978 at the University of Minnesota (with mentors Reuben Hill, Bob Leik, and Jeylan Mortimer). She spent the next 25 years as a faculty member in two departments (Human Development and Sociology) at Cornell University, where she was honored in 1992 with an endowed chair as the Ferris Family Professor of Life Course Studies. Cornell colleagues and esteemed scholars of the life course and human development, such as Glen Elder, Jr., Urie Bronfenbrenner, and Robin M. Williams, Jr., substantially influenced her life-course scholarship. Moen left Cornell in 2003 to join the sociology department of the University of Minnesota, where she currently holds a McKnight Presidential Chair.

Dr. Moen's research agenda considers the links between existing and often outdated institutions (especially work, family, gender, and retirement), social transformations (economic, demographic, social and technological, as well as policy shifts), and the life biographies, health, and well-being of individuals and families. Her life-course framework promotes understanding of the organizational arrangements and pathways perpetuating gender and age disparities in life quality, particularly health, well-being, and satisfaction. Investigating patterns of continuity and change in roles and relationships has been one of the linchpins of Moen's research. Indeed, she has spearheaded several important longitudinal studies, including the Women's Roles and Well-Being Study, the Cornell Retirement and Well-Being Study, and the Ecology of Careers Panel Study.

Moen's scholarship demonstrates how gender and age, as master statuses, are embedded in social structures and conventional thinking, shaping the life choices and life chances of men and women as they enter, persist in, exit, and sometimes reenter and re-exit roles and relationships over time. Her book, *The Career Mystique: Cracks in the American Dream* (2005; with Patricia Roehling), summarizes and builds on this work and was named the "Best Professional and Scholarly Publication in Sociology in 2005" by the Association of American Publishers.

One of Moen's most significant scholarly contributions is her illumination of the importance of *linked lives*, or the ways the life domains such as work and family are intertwined. Her many studies of the various linkages between husbands and wives, where the couple rather than the individual serves as the unit of analysis, have contributed to our understanding of the work, family, and retirement experiences of dual-earner couples. *It's about Time: Couples and Careers* (2003) chronicles the adaptive strategies of couples trying to manage two jobs and their family life in a world based on the (one job per family) career mystique.

Phyllis Moen has published more than 70 articles in many prominent scholarly journals: *The American Sociological Review*, *American Journal of Sociology*, *The Gerontologist*, *Social Problems*, *Journal of Marriage and the Family*, *Social Forces*, *Sociological Quarterly*, and *Journal of Health and Social Behavior*. She is the author, coauthor, or editor of eight books, including *Examining Lives in Context: Perspectives on the Ecology of Human Development* (1995), *A Nation Divided* (1999), and *Social Integration in the Second Half of Life* (2001). Her research has been funded by government agencies, including the National Institute for Child Health and Human Development, National Institute on Aging, and National Science Foundation, and private foundations (Alfred P. Sloan Foundation, Atlantic Philanthropic).

Moen's influence on life-course sociology is also evidenced through her professional leadership. She served a term as director of the sociology program at the National Science Foundation in the late 1980s, was elected president of the Eastern Sociological Association (2003–2004), and has chaired both the Family (1994–1995) and Aging and Life Course Sections (2006) of the American Sociological Association. She has played a pivotal role in establishing a number of important research institutions, including the Bronfenbrenner Life Course Center at Cornell University

(1992). Within that center she helped establish (with Karl Pillemer) the Cornell Gerontology Research Institute. With support from the Alfred P. Sloan Foundation, Moen created the interdisciplinary Cornell Careers Institute. Dr. Moen co-founded (with Erin L. Kelly) the Flexible Work and Well-Being Center at the University of Minnesota in 2005 to study ways to offer employees greater control over the time and timing of their work.

**SEE ALSO** Volume 2: *Careers.*

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***Noelle Chesley***

## MORBIDITY

**SEE** Volume 3: *Arthritis; Cancer, Adulthood and Later Life; Cardiovascular Disease; Chronic Illness, Adulthood and Later Life; Diabetes, Adulthood and Later Life; Disability and Functional Limitation, Later Life; Life Expectancy; Mortality; Self-Rated Health.*

## MORTALITY

The study of mortality reveals patterns about the number of deaths in a population. Mortality, along with fertility, is one of the major stages in the life course that all individuals experience; all are born and will die. Opposed to a more sociological study of death and dying that generally focuses on societal values, norms, and attitudes regarding death, mortality research is typically studied from a population or demographic perspective. As such, it is primarily concerned with key demographic questions: How is mortality measured? How does mortality change over time? Who is dying and why are they dying? What are people dying from?

Decreases in mortality in the 20th century have been one of the most notable world achievements. Advances in social conditions, nutrition, public health, and medicine have led to fewer deaths in infancy and early childhood and have led to mortality occurring at increasingly older ages. On average, individuals living in the early 21st century can expect to live approximately 30 years longer than comparable individuals living a century ago. While decreases in mortality is a positive trend, it brings with it new challenges and concerns. Reductions in mortality across the world are partially responsible for increases in aging populations and substantial growth in the overall world population.

The study of mortality is important because it provides insights into both historical and current population dynamics. It allows researchers to better understand the economic, social, and political conditions that influence population growth in a society. An understanding of mortality allows us to assess population health and to understand the changes in living conditions throughout time and between different societies. Importantly, a focus on mortality provides information on social and environmental problems associated with population growth.

### MEASUREMENT

The accurate and reliable measurement of death is paramount to the study of mortality. Mortality is often measured through mortality rates, which are simply expressed as the number of deaths per 1,000 persons in a given year for a given population. Mortality rates also can be used to examine deaths by specific causes or for specific age, gender, or race/ethnic groups to provide a more complete understanding of the structure of a population. For instance, a researcher may want to know how many deaths occurred in the United States among 65- to 75-year-olds in order to understand both population growth and aging trends. Often, mortality rates are used to construct life-expectancy tables, which provide among other information, the expected probable age of death for each specific age category. For example, the use of a life-expectancy table can inform researchers that in 2005, a 65-year-old male in the United States was expected to live an average of 17.2 more years (NCHS, 2007).

The measurement of mortality is not always simple, because deaths can be caused by diseases, degenerative processes, the physical environment, the social environment, or a combination of factors. The death certificate is a particularly useful, official legal document that records causes of death. Death certificates also include information such as age, sex, race/ethnicity, and additional demographic characteristics. They are an invaluable resource for researchers seeking to understand health trends and aiming to develop health intervention strategies.

The causes of death that are listed on death certificates have been standardized through the World Health Organization (WHO) into the International Classification of Diseases (ICD), a periodically updated system that is used to ensure consistency across countries in the collection of

(health) and mortality data. But there are often inaccuracies in death certificates and there are temporal changes in the classification of causes of death. Errors may also result from misdiagnoses, inadvertent omission of diseases, difficulties when several diseases are involved, or biases in reporting the underlying causes due to the physician's knowledge and experience in determining causes of death. For example, Alzheimer's Disease has only recently been identified as a major cause of death that is becoming more regularly reported on death certificates and remains subject to underreporting contingent on the severity of the disease and co-occurrence with other diseases.

In addition to causes of death, researchers are also interested in the "actual" causes of death. Whereas causes of death are limited to pathological conditions such as specific diseases, homicides, or accidents, "actual" causes of death are based on potentially modifiable factors that lead to the death (McGinnis & Foege, 1993). For instance, while a cause of death may be lung cancer, the actual cause of death may be due to excessive tobacco smoking. Actual causes of death are also prone to mismeasurement. It is difficult to ascertain actual causes of death with certainty because most diseases and injuries are linked to numerous causes and conditions.

## HOW DOES MORTALITY CHANGE OVER HISTORICAL TIME?

Mortality is often studied through a historical perspective to understand how death causes and correlates have changed over time. The epidemiologic transition is a framework that is used to understand the relationships between mortality rates and major causes of death throughout history. The general hypothesis suggests that as nations modernize, they tend to follow similar trajectories characterized by improvements in social, economic, and health conditions. Following these changes, mortality rates decline and life expectancy increases. Better social conditions with advances in sanitation and public health reduce infectious diseases and disproportionally benefit infants, children, and women of childbearing ages. Advances in infant, childhood, and maternal mortality mean that people live to older ages. In general, the epidemiologic transition suggests that as societies modernize, infectious diseases such as influenza, pneumonia, and smallpox are replaced with degenerative, stress-related, and manmade diseases such as heart disease and cancers that affect older aged populations.

## WHO IS DYING AND WHY?

Death rates vary by social demographic characteristics such as age, gender, race/ethnicity, social institutions, and socioeconomic status. A focus on sociodemographic categories highlights the relevance of social conditions and structural positions on mortality, identifies the impact of social processes, and informs public policy decisions about how societal changes can influence health and mortality trends in the future.

**Age** Mortality rates differ by age and generally show a J-shaped curve of deaths with age. First, there are higher rates of mortality for infants because of the increased vulnerability found during childbirth and in the first year of life. Death during the first year of life is an important variable of consideration and is often measured as the infant mortality rate, or deaths among infants under age one per 1,000 live births. As of 2007 the United States had an infant mortality rate of 6.5 per 1,000 live births, compared to high rates in middle Africa with a rate of 141 in Angola and low rates including 2.6 in Singapore and 2.8 in Japan (Population Reference Bureau, 2007). This is followed by a sharp decrease in mortality risk with very few deaths occurring during childhood and early adolescence, with the lowest levels of mortality occurring around age 10. Next, there is an increase in death between the ages of 15 and 24 because of the increased number of deaths associated with accidents, homicide, and suicide among this age group, particularly among males. Finally, this is followed by increasing rates of mortality into older age categories, with large increases occurring after age 85. Whereas in the past people were likely to die at any age, current age trends reduce the highest risks of mortality to a narrow age range concentrated at older ages; these trends will have large impacts on overall population structures and lead to larger elderly populations.

**Gender** Gender differences in mortality vary by country, but in general, women tend to live longer than men. This is particularly true in developed countries where advances in maternal mortality have virtually eliminated medically preventable deaths during childbirth. Indeed, in 2000, developed countries had a maternal mortality rate of 20 deaths per 100,000 live births, compared to a rate of 400 for developing countries (WHO, 2004). In the United States females have experienced substantial longevity advantages over the past century. Between 1920 and 1950, females experienced increased advantages in mortality rates over men with increasing gains in most causes of death. The gap continued to increase between 1950 and 1970, primarily due to higher rates of diabetes-related mortality for males. 1970 to 1979 showed a steadily increasing (albeit slower) difference in the sex gap, with peak differences of 7.8 years occurring in 1975 and 1979 (Arias, 2007). This has been followed by a steady erosion of mortality advantages for women explained by social and behavioral changes, including lower infant mortality rates that benefit males because of their higher infant mortality rates, increases in female

smoking, and the accumulation of social and environmental stress associated with more women in the workforce (Verbrugge, 1980).

The gender gap in mortality is often explained through both social/environmental and biological explanations. Biological approaches suggest that women are protected through reproductive physiology, hormones, and genetic advantages that reduce risks of major degenerative causes of death. For example, male sex hormones may predispose men toward aggressiveness that leads to more fatal accidents and violent deaths (Waldron, 1985). Social approaches emphasize that mortality differentials are associated with behavioral differences linked to gender socialization, self-protective behaviors, and/or differences in exposure or vulnerability to stressors (Nathanson, 1984). Socialization processes include the processes through which individuals develop an awareness of social norms and values. Socialized gender differences are linked to access to food and health care, social networks, occupational hazards, and participation in health-related behaviors. For instance, men are less likely to use preventative care than women. Men are also more likely to engage in harmful behaviors including alcohol abuse, drunk driving, violent behaviors, and cigarette smoking—the single most important cause of higher mortality for males.

**Race/Ethnicity** Socially and economically disadvantaged race/ethnic groups have higher mortality rates in most societies. For example, African Americans in the United States have higher risks of death for nearly every major cause of death, live approximately 7 years less than European Americans, and experience even wider mortality gaps with Asian Americans, who are socioeconomically advantaged. This relationship is often explained through the confluence of structural socioeconomic disadvantage and individual lifestyle behaviors. But race/ethnic differences are also linked to other negative factors, including racism, increased physiological stress responses to adverse conditions, compromised access to health care, dangerous or deprived physical environments, deleterious health behaviors, and small social support networks (Hummer, 1995).

Interestingly, the U.S. Latino foreign-born population has been shown to have more favorable mortality than U.S.-born residents. While Latino immigrants typically have similar socioeconomic standing to non-Hispanic Blacks, they do not suffer the accompanying health disadvantages and have mortality rates similar or better than non-Hispanic Whites. This is an ''epidemiologic paradox'' that continues to confound many researchers, but is likely to be due to a combination of data issues and nativity factors including health behaviors, support systems, health status upon migration, and illness-related return migration (Palloni & Arias, 2004).

**Social Institutions** Social institutions such as marriage and religion have a large impact on mortality. Generally, married individuals have lower mortality than those who are not married. Marriage is linked with numerous positive support factors including emotional and financial benefits. Married individuals benefit from higher incomes, higher social prestige, and stable employment (Rogers, 1995; Smith & Waitzman, 1994). Marriage is linked to care-giving relationships, social integration, and social networks. Also, marriage is linked with better eating habits, medical compliance, and overall healthier behaviors (Ross, Mirowsky, & Goldsteen, 1990). For instance, married individuals are less likely to smoke cigarettes, to abuse alcohol, and to use illicit drugs (Umberson, 1992). Unmarried men have high levels of mortality from social pathologies including accidents, suicide, homicide, and other risk-taking behaviors (Rogers, 1995).

Increased religious participation is associated with mortality advantages. Compared to those that attend religious services at least once a week, those that do not attend religious services have nearly twice the risk of death (Hummer, Rogers, Nam, & Ellison, 1999). Religious activity is associated with health behaviors and lifestyles, with religious individuals less likely to smoke cigarettes, drink alcohol, and to engage in risky behaviors. Religion is also linked to increased levels of social integration, psychological resources, coping resources, positive emotions, physiological effects, and potential financial support (Hummer et al., 1999; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000).

**Socioeconomic Status** Higher status individuals have lower mortality rates and live longer in nearly every society. Socioeconomic status is measured by a variety of indicators including income, education, and occupation. Each of these measures indicates that high levels of socioeconomic status lead to lower levels of mortality. Increases in education are linked with lower levels of mortality in a graded fashion, with each education category at a lower risk than each preceding education category (Adler, Boyce, Chesney, Cohen et al., 1994). Education provides individuals with information to determine avoidable risks and income provides a means to purchase better health. High levels of education are linked with higher levels of health knowledge that promote healthy behaviors. Also, educational attainment indicates access to knowledge and skills that are associated with successful employment, higher earnings, accurate knowledge about health, and a greater sense of control.

Compared to the unemployed (those without jobs but who are actively seeking employment), employed individuals are healthier. Although the rewards of employment are health-enhancing, there is a health selection effect with those in poor health (and ultimately, at an elevated risk of mortality) more likely to be unemployed or not actively seeking employment. Income is a link between education and mortality that can directly affect mortality through the purchase of health care, adequate housing, and a nutritious diet (Elo & Preston, 1996). Income may also be indirectly linked to mortality through healthy behaviors or the stressors associated with poverty or financial distress. In addition to income, the employed have access to social networks, health insurance, and workplace amenities (i.e., gyms or health promotion services) that promote both physical and mental health. Specific occupations also affect mortality, with higher levels of occupational status and prestige linked to lower levels of mortality. For example, the commercial fishing and construction industries are perennially ranked as some of the most dangerous jobs in the United States due to a high propensity of on-the-job accidents. In addition to workplace hazards, the link between occupational status and mortality is also likely to be due to the physical demands of a job, workplace stress that may affect other negative health behaviors, and exposure to hazardous materials or toxins.

Low socioeconomic status may also have higher levels of mortality because of structural access to resources that can have lasting effects throughout the life course. For instance, low education and parental income during childhood may place a child at risk due to poorer schools, unhealthy foods, and unsafe play areas that may subsequently influence negative health behaviors. Cumulative disadvantage theories suggest that early risk factors can influence both short-term and long-term health outcomes. Although it is possible to overcome initial hardships, it is more likely that an accumulation of disadvantages is likely to hinder an individual's chances of good health. Additionally, poor living conditions are often associated with less access to parks, health care facilities, or healthy foods, and with higher levels of social and psychological stressors and crime that are both indirectly and directly linked to mortality outcomes.

## WHAT ARE PEOPLE DYING FROM?

Death rates are often calculated as either occurring from a general category of all causes or they are broken down into deaths due to specific causes. A focus on cause-specific mortality allows researchers to better understand health at a population level. As indicated by the epidemiologic transition, modernization leads to a shift in the causes of death to more "manmade" types of disease. For example, the most frequent causes of death in the United States include: diseases of the heart, malignant neoplasms (cancer), cerebrovascular diseases (stroke), chronic lower respiratory diseases, accidents, and diabetes mellitus. Research on actual causes of disease has suggested that nearly half of all deaths could be attributed to modifiable and preventable behaviors (Mokdad, Marks, Stroup, & Gerberding, 2004).

The leading "actual" causes of death in the United States include, in ranked order from high to low: tobacco use, poor diet/physical inactivity, alcohol consumption, microbial and toxic agents, motor vehicles, firearms, sexual behavior, and illicit drug use (McGinnis & Foege, 1993; Mokdad et al., 2004). Tobacco is considered the foremost actual cause of death and it is linked to cancers, cardiovascular diseases, and chronic lung diseases, with approximately 18% of all deaths in the United States attributable to smoking in 2000 (Mokdad et al., 2004). Increasing frequency of cigarette smoking is associated with higher risks of mortality and current and former smokers are at higher risks than never smokers (Rogers, Hummer, & Nam, 2000). Diet and inactivity are associated with obesity, heart disease, cancer, and diabetes. Both low and high levels of body weight have higher risks of death, but for different causal reasons. Individuals who are underweight have higher levels of mortality primarily due to other diseases or malnutrition that cause them to be underweight. And individuals who are obese have higher levels of mortality than those who are considered normal or slightly overweight because of links to cardiovascular disease, cancer, and diabetes.

## FUTURE OF MORTALITY RESEARCH

One of the main goals of mortality research is to understand mortality differentials and to reduce health disparities. Researchers are dedicated to understanding the reasons for race/ethnic, gender, and socioeconomic differences in mortality. One way to address these disparities is to develop and use more reliable and accurate measurements of important variables. For instance, researchers will continue to examine the role of important factors such as knowledge, money, power prestige, and social networks as "fundamental causes of disease" that shape exposures to risk and mortality (Link & Phelan, 1995). Measurement of socioeconomic status will benefit from more specific operationalizations. For example, measures of wealth and income portfolios are often better measures than simple measures of occupational income, and specific occupational tasks and decision-making tasks will further explain the relevance of occupations. Further measurements that will also bolster current mortality research include detailed information on the physical and built environment and advanced measurements of social networks and social relationships. Current

mortality research has also begun to include more biological markers, to understand the complex interplay between social and biological characteristics. Accordingly, future research will continue to include biological data that accurately measures stress hormones, genetic information, anthropometry, metabolism, cardiovascular markers, nutrition, chromosomes, neurotransmitters, and inflammatory markers.

Finally, the future of mortality research will benefit from an explicit life course perspective. This is essential to fully understand disease pathways and the causes of mortality outcomes. A life course perspective will provide insights into the importance of changes in socioeconomic status, health, social networks, physical environment, stressors, and environmental exposure on mortality. Researchers will be better able to understand the relationship between early life conditions and later life mortality. It is highly likely that economic and living conditions during childhood will have lasting impacts on later life decisions and opportunities. New advances in data collection will allow researchers to examine individuals throughout their lives to determine how health-related behaviors, social environment, and economic conditions influence patterns of mortality.

**SEE ALSO** Volume 3: *Age Structure; Death and Dying; Demographic Transition Theories; Epidemiologic Transition; Health Differentials/Disparities, Later life; Life Expectancy; Population Aging; Suicide, Later Life.*

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***Jarron M. Saint Onge***

# NEIGHBORHOOD CONTEXT, LATER LIFE

Older adults are more vulnerable to changing social and economic conditions in their neighborhoods than younger people (Glass & Balfour, 2003). This vulnerability may translate into poorer health, increased disability, less frequent use of health care services, and poorer prognosis for recovery from a chronic disease. There are several reasons why this might be true. First, the cognitive and physical declines associated with normal aging and chronic disease mean that older people will be less able to cope with transportation issues, declining physical infrastructure, and the loss of commercial and social services that can accompany neighborhood change. As residential and economic change modifies an older person's surroundings, he or she may have a more difficult time finding services and overcoming new physical barriers. Physical challenges and cognitive decline may make even a familiar and stable neighborhood more difficult to negotiate.

Second, older adults may be more vulnerable to local conditions because the social space of older people is smaller and tends to be more geographically constrained. As people age, social ties and social networks contract as children leave home, work is left behind, and friends and family die or move away. Neighbors, local volunteer opportunities, and social groups often become the foundation of an older person's social network and social support system. Thus, the social resources of the residential community will have a much larger impact on an older person. Finally, older people who stay in their homes after retirement have been exposed to the local environment for much longer periods of time than younger residents. The cumulative impact of environmental assaults or other neighborhood conditions may appear only later in life after continuous exposure to the risks posed by local environments.

This entry examines the neighborhood and community conditions researchers believe may have an impact on the health of older people. It also examines the types of measures social scientists use to capture these community conditions and how neighborhood and community conditions may affect health. Many theories suggest that there are mechanisms that link where one lives to one's health. This entry focuses on those theories that have special relevance to the lives of older adults, and will conclude with a review of evidence on a variety of health outcomes including mortality, disability, the onset of chronic disease, and perceived health. This final section also assesses whether scientific research actually supports the notion that older people are more vulnerable to the economic and social conditions in their neighborhoods.

## CHARACTERISTICS OF THE RESIDENTIAL COMMUNITY

Communities and neighborhoods have different levels of material and social resources that may affect the daily lives of individuals. Material resources include the built environment, or the nature and quality of transportation, buildings, and physical infrastructure such as lighting, sidewalks, and streets. Other aspects of the built environment include parks and recreation areas, open-air playgrounds and pedestrian walkways, community spaces such as town squares, band shells, or other shared physical resources. Well-lit streets and sidewalks, for instance, are of great benefit to an older person with mobility issues.

Another set of material resources that have an impact on the well-being of individuals is the availability of commercial, government, and institutional goods and services. Easily accessible and well-stocked grocery stores are an example of the type of retail establishments that can benefit individuals. The quality of local services such as public transportation and health care matter a great deal, particularly to people who have lost the ability to drive or who must see their health care provider often. Government services also may vary substantially. Police and fire protection are not consistent across all neighborhoods and communities. Local tax revenues and the volume of crime influence the quality of policing. The distribution of commercial goods and services is also quite uneven across communities. Particularly for persons in rural areas, who are more likely to be over 65, and those in poor neighborhoods, simple access to high-quality food within reach of one's home may be a problem.

Social resources are more difficult to describe but no less important to the well-being of individuals. Places of worship, local social groups such as Kiwanis and the Knights of Columbus, social and emotional support groups, bridge leagues, and recreational groups are all examples of the social resources communities have that allow people to remain engaged and socially active. Similarly social services such as elder care, home health care, meals-on-wheels, home visitation, and other related geriatric services often have their origin in a community organization such as the local church. Many communities do not have the resources or people necessary to support these types of voluntary organizations. For people who have lost a spouse or lack other family and friends, these informal social networks can be critical not only in keeping them connected to the larger world, but in providing basic social services such as meals, transportation, and companionship for little or no charge.

People also have very different perceptions of the quality, warmth, and safety of their neighborhoods and communities that may or may not be tied to a measurable reality. Older people often perceive residential change, rapid economic growth, or increasing ethnic diversity as threatening to their way of life or community. Perceptions, then, can determine how willing individuals are to venture out of their homes or take part in community-wide activities.

## MEASURING RESIDENTIAL CHARACTERISTICS

Social scientists find a variety of ways to measure the characteristics of neighborhoods and communities that can then be linked to individual measures of health and well-being. The most popular method is to use the economic characteristics of neighborhoods, such as poverty, household structure, ethnic composition, median income, the proportion of owner-occupied households, and residential instability, to act as approximations of the available material and social resources. Poor neighborhoods with few owner-occupied housing units are thought to lack material and social resources also.

These types of data are widely available at the neighborhood level (defined either as a census tract or census block group) in the United States, either from the decennial Census or the American Community Survey. Data from other surveys that ask about health and well-being can be linked to data from the Census if one knows the address of the respondent to the original survey. Data analysts can then link together the characteristics of places people live to their individual characteristics and health outcomes. Neighborhood-level economic and demographic data, as measured by the Census, are limited because there is an implicit assumption that poverty and residential instability are always related to poorer material and social resources. Nevertheless, they are the most efficient way to describe communities because the data are widely available and periodically updated for all neighborhoods in the United States. These indicators also can be easily linked to other types of data because residential addresses can be matched directly to Census data.

Data about material and social resources in a neighborhood may also be gathered directly from commercial establishments, government services such as law enforcement, and social entities such as churches. For instance, local law enforcement agencies often provide information about crime incidence by neighborhood or street address. Other administrative data also may be useful, such as birth, death, and marriage records. Retail service information can be acquired through commercial data services such as Claritas, which sell information about store locations and local demographics. Other data can be gathered on a smaller scale for social institutions such as churches by buying specialized mailing lists or directory services. When used in combination with Census data, these types of information provide an integrated profile of the material and social environments that surround older adults.

The third way researchers gather information about the local environment is through a method called systematic social observation (SSO). SSO is a standardized approach for directly observing the physical, social, and economic characteristics of neighborhoods, one block at a time. Researchers create videotape and observer logs to characterize city blocks. Observers count and code such things as the number of boarded up or burnt out buildings, incidences of graffiti, and illegal activities such as drug selling and prostitution. This method is very effective at capturing the built environment in a more thorough way because observers both count and rate the quality of buildings and streets. It is also an effective way of capturing street-level interactions that are not often captured in other types of data collection (Raudenbush & Sampson, 1999).

Finally, respondents can be asked about their perceptions of various aspects of the neighborhood. Neighborhood surveys often ask respondents questions about their perceptions of the social organization, social cohesion, and disorder in their residential neighborhoods. Social cohesion is used to describe the strength of psychological and social relationships between members of a community. The organization of social relationships, such as how community groups such as the local Boy Scout council or School Board draw different members of the community together, will affect social cohesion. Social disorder is a term used to describe both the feeling of neighborhood disintegration and its behavioral and physical manifestations such as public drinking, street violence and boarded up or burnt out buildings. Typical questions about these concepts may ask about the ability of neighbors to control unwanted behaviors such as drug use and fighting. The purpose of these questionnaires is to assess perceptions rather than objective realities. A neighborhood may appear safe from observation but its inhabitants may perceive changes and threats that are not visible from other sources of data collection. Neighborhood surveys also are a good way to assess whether individuals feel close to their neighbors socially and whether they feel integrated into their communities (Raudenbush & Sampson, 1999).

## POTENTIAL LINKS BETWEEN NEIGHBORHOODS AND INDIVIDUAL HEALTH

The remaining question to address is how geographic environments and changes in those environments affect individual health. Much of what researchers know about the links between geographic context and health are the result of studying poverty and health disparities. Spatial differences in poverty in the United States have been of particular concern. Residential segregation by income and race has always been a feature of the American landscape. The result is that the physical and environmental quality of neighborhoods varies substantially within a single city and across the country. Within that context, researchers usually agree on four primary mechanisms, although there is some disagreement about which is most important. First and foremost, the local environment may affect all forms of health and health care-seeking behavior. For example, poorly-lit streets without sidewalks and inadequate recreational facilities will limit the amount of walking or exercising people are willing and able to do. Also, the availability of high-quality, nutritious food can modify dietary intake.

Some researchers have argued that local social norms fostered by concentrated poverty and disadvantage as well as an individual's social networks may encourage cigarette smoking, drinking, and illegal drug use. This type of influence has been documented for young people but is usually not found among older persons. Similarly if local

health care facilities are sparse or not easily accessible, individuals may find it difficult to find and use appropriate health care. This can either exacerbate existing health conditions or forestall the diagnosis of emerging conditions. In any case, the environment imposes constraints on or provides opportunities for individuals to engage in behavior that contribute to better health.

Rich social engagement and strong social networks have been demonstrated to facilitate healthy aging. Older persons who remain active in community life and who have family and friends who visit and help with basic activities of daily life live longer and are less likely to be disabled. Social engagement enhances brain function and is likely to lead to a more active lifestyle. In studies of the elderly from mid-life to older ages, researchers have found that those persons who remain socially active and continue to have contact with friends and neighbors show fewer signs of dementia and are less likely to lose both hearing and vision. In communities and neighborhoods with rich social resources, often called *social capital*, social engagement is easier.

Poor, transient communities or those undergoing rapid economic change often lack these deep social networks. Thus, the second way in which communities can affect health is because they may fail to provide inhabitants with the opportunities to remain engaged. The density and quality of social resources in a local community will also affect trust among neighbors as they have more opportunities to interact and remain friends. Several researchers have proposed a different but related pathway from the community social environment to individual health. Christopher Browning and Kathleen Cagney (2002), among others, suggest that collective efficacy—or the ability of the community to affect community-level outcomes such as social disorder (including public drinking) or the preservation of public places—is positively related to both the maintenance of social capital and the quality of community relationships. Neighbors who feel they can work together to solve community problems, such as crime and unwanted commercial activity, will feel more engaged and better supported by each other. Collective action also fosters trust among neighborhoods and further enhances residents' feelings of security and social connectedness.

The biological and emotional stress associated with living in dangerous or disordered environments can lead to poor health directly by modifying the production of stress hormones, which are thought to lead to a higher incidence of heart disease, impair brain activity, and impair immunity to infectious disease. Chronic stress often leads to perpetual elevation of these stress hormones, which is implicated in the onset of diabetes and the functioning of the central nervous system. People can be stressed in two ways by poor and disordered environments. First, the presence of physical and social disorder may make people feel as if they are constantly in danger of attack. Street crime and crumbling infrastructure will heighten this feeling of vulnerability because people believe they cannot control what happens to them in their own homes or on the street. Social disorder may also lead to a greater number of stressful life events for individuals. People in poor neighborhoods are more likely to be the victim of a crime, lose a loved one to violence or drug abuse, and suffer a house fire or eviction (Boardman, 2004). Perceived and actual vulnerability combine to affect mental health directly and physical health through the endocrine and neurological systems.

The last pathway from the local environment to health leads directly through the physical environment itself. Residents of poorer neighborhoods and communities are less likely to be able to control land use. Industrial land use, mixed zoning, and more deliberate waste dumping often make poor communities environmentally hazardous. The health consequences of air, soil, and water contamination are well-known. Neighborhoods with little political or economic power often cannot forestall these dangerous forms of pollution. Political power in the community is central to preventing unwanted land use yet is often undermined by limited economic resources and the lack of community activism. Individuals in these communities often do not have the wherewithal to move away to more desirable neighborhoods. Older adults are likely to have the longest exposure to environmental hazards and have fewer resources enabling them to move.

## RESEARCH ON THE HEALTH OF THE ELDERLY

Despite the clear connections between the local environment and the health of older adults, the actual evidence is often less clear. For some health indicators, researchers find a strong and consistent link between place of residence and the health outcome, whereas for other outcomes the effect is less straightforward. The effects of different aspects of the residential environment on the health of older adults very much depends on how health is defined. In addition, it is difficult to make broad generalizations from existing research because the measures used to characterize the residential environment are inconsistent.

Very few researchers have found any effect of the local environment, measured either by material and social resources or by perceptions, on mortality rates among older adults. Most of the residential effects on mortality are observed before age 65 (Waitzman & Smith, 1998). The only exception to this is among older persons who

have Mexican ancestry or who were born in Mexico (Eschbach et al., 2004). The lack of mortality effects among the elderly in general may be true because many of the fatal assaults on health that occur in socioeconomically disadvantaged neighborhoods, such as violence or unhealthy behaviors, happen in early adulthood. It is less clear why these effects can be found among different ethnic groups.

Similarly, there is mixed evidence as to whether local economic and social circumstances are associated with disability and physical function in later life. Many authors have found that once something is known about individuals and the families they live in, the social and economic environment does not seem to matter (Feldman & Steptoe, 2004; Robert, 1998). Other authors suggest that physical disability in older adults is, in fact, higher in communities where the built environment is poor (Balfour & Kaplan, 2002). In this case the difference may have to do with how one thinks about the residential environment. In studies that include measures of the built environment, the authors directly measure those aspects of the residential environment that can be challenging to a person who is disabled or partially disabled.

In studies of hospitalization and survival following a heart attack, the neighborhood social and economic environment seems to matter when both younger and older people are included in the study (Borrell et al., 2004). This suggests that both subsequent mortality and the rehospitalization of persons who have had a heart attack or other cardiovascular-related events such as a stroke are higher for those living in disadvantaged neighborhoods. In a study restricted to persons over age 70, however, no differences were found in the occurrence of diseases such as strokes, congestive heart failure, or heart attack among people who live in different types of neighborhoods (Wight et al., 2008).

Finally, there is one health indicator on which all researchers agree. The majority of studies have found that all types of environmental and neighborhood stressors are linked to poorer perceived health among older adults. When asked about their health, older persons who live in challenging environments, whether measured by perception or reality, are more likely to say that they are in poor or fair health (Cagney, Browning, & Wen, 2005; Robert & House, 2000). This suggests that the local conditions have the greatest effect on the mental health of older adults. The social and physical isolation associated with living in a disadvantaged neighborhood will have a direct impact on how they feel about themselves and their well-being. The physical consequences may then flow from this feeling of vulnerability and deprivation.

**SEE ALSO** Volume 3: *Aging in Place; Health Differentials/Disparities, Later Life.*

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***Felicia LeClere***

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# NEUGARTEN, BERNICE

***1916–2001***

Bernice L. Neugarten was a monumental figure in the field of adult development and aging. In a career spanning more than 50 years, Neugarten wrote or edited over 160 published manuscripts, including the books *Middle Age and Aging* and *Age or Need?* Neugarten's ideas forever changed understandings of human development as she turned attention to middle and later life during a time when most scientific inquiry focused on children. Nearly three dozen papers that embody her most important contributions are collected in *The Meanings of Age: Selected Papers of Bernice L. Neugarten*.

Born in a small Nebraska town, Neugarten was educated at the University of Chicago, where she ultimately earned a doctoral degree in Human Development. After taking time to raise children and pursue other writing and research, she returned to the University of Chicago as a faculty member in the Committee on Human Development and eventually served as its chair. In 1980 Neugarten founded the doctoral program in Human Development and Social Policy at Northwestern University in Chicago.

Neugarten had a knack for finding catchy phrases to express provocative ideas. One example is the distinction between the "young-old" and "old-old"—between those who are relatively healthy, affluent, and active and those who are not, regardless of their chronological age. This notion challenged common images of aging and old age as negative and pathological. It was also meant to reflect the great individual differences that exist among older people, differences produced by the unique experiences and interests that come with long lives.

Although age is a convenient way to classify ourselves and others, Neugarten argued that age often poorly predicts psychological, biological, and social statuses. She also speculated that an aging society, which is produced by longer life expectancy and better health, brings the potential of an "age-irrelevant society" and a more "fluid life cycle," in which age becomes less meaningful in determining experiences in work, education, family, and leisure. Neugarten also warned that an aging society brings the potential for politics of "age divisiveness," because younger groups may turn against unprecedented numbers of elders.

Neugarten's 1965 paper "Age Norms, Age Constraints, and Adult Socialization," published with Joan Moore and John Lowe, is one of the most frequently cited social science articles of the 20th century. Using data from the landmark Kansas City Study of Adult Life, on which Neugarten was a key investigator, this paper introduced the concepts of "social clocks" and "age timetables." It investigated individuals' awareness of being "early," "on-time," or "late" with respect to major life transitions and individuals' judgments about the appropriateness of a variety of recreation, appearance, and consumption behaviors at different ages. Neugarten emphasized that these age norms and expectations act as

"prods and breaks" on behavior, in some cases prompting it and in other cases preventing it.

Neugarten often said that she was struck by the amount of psychological change rather than stability in adult life. Adulthood cannot be understood simply by projecting forward those concerns important in childhood and adolescence. She begged scholars to consider the many new psychological issues that emerge throughout adulthood. For example, Neugarten noted the "changing time perspective" at midlife, when people begin to think in terms of time-left-to-live rather than time-since-birth; and the "personalization of death," during which men begin to "rehearse" for illness and women for widowhood.

Throughout her career, Neugarten emphasized the active roles that people play in shaping their lives; yet she also acknowledged that people's actions are significantly shaped by the social settings and historical time in which they live. People cannot be understood in isolation from their environments, and the study of lives requires collaboration between psychology and sociology.

In later work Neugarten advocated that age-based public policies be replaced, or at least better balanced, by need. She was also intrigued by the ethical issues associated with longer lives, including how medical care for very old people might be handled in more effective and humane ways, as well as how the presence of large numbers of elders presents both challenges and opportunities for families and societies.

Toward the end of her life, Neugarten made the controversial statement that gerontology would eventually disappear as a field. Aging is a lifelong process that begins at birth, not at an arbitrary point in later life. From a policy standpoint, age-related entitlements were being questioned, and from the standpoint of providers, recognition of the difficulty of designing and delivering services based solely on age was growing. For Neugarten, the common practice of "chopping up" the life cycle into distinct periods worked against the need to understand the complexity and beauty of the whole.

**SEE ALSO** Volume 3: *Aging; Oldest Old.*

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## NURSING HOMES

**SEE** Volume 2: *Policy, Health;* Volume 3: *Assisted Living Facilities*; *Long-term Care; Retirement Communities.*

# O

## OBESITY, LATER LIFE

**SEE** Volume 2: *Obesity, Adulthood.*

## OLD AGE

**SEE** Volume 3: *Aging; Oldest Old.*

## OLDER AMERICANS ACT

**SEE** Volume 3: *Policy, Late-Life Well Being.*

## OLDER DRIVERS

Modern society now faces the challenge of meeting the transportation needs of a rapidly expanding population of older adults. For nearly all of history, older adults have accounted for a very small percentage of the total population. Now the oldest old, or persons 85 and older, are the fasting growing segment of the population. For example, in 1998 the 65 to 74 age group was 8 times larger than in 1900, the 75 to 84 age group was 16 times larger, and the 85 and over age group was 33 times larger (Hu, Jones, Reuscher, Schmoyer, & Fruett, 2000). This large population of older persons has been responsible for creating new business, housing, social service, and medical trends. Changing demographics have had, and will continue to have, enormous implications for transportation. Given that family sizes have declined over the past century, ever-increasing numbers of older adults will need to meet their own mobility needs for as long as possible.

In addition to the dramatic increase in the older population, two major changes in transportation demographics have occurred for older drivers: (a) Older drivers are driving more miles than ever before; the current cohort of older drivers is driving more than past cohorts (i.e., so the number of miles driven on average by a 75-year-old in the early 21st century is greater than the number of miles driven by the same in prior years) and (b) there has been an increase in the proportion of women drivers. As of 2008, almost half of all licensed drivers are women. Although men still account for the majority of miles driven, the increasing number of women in the workforce, along with the increase of women's economic independence and the increase in their vehicle ownership, represent major demographic changes, and these changes have implications for aging and transportation. For example, many older women can take over the driving role, thus extending the mobility and independence of both older adults.

### SIGNIFICANCE OF DRIVING FOR THE OLDER ADULT

Mobility is a critical component of independence and quality of life. Both older and younger persons depend on the automobile for most of their travel. In 1990 between 75% and 95% of all trips made by older persons were made by private automobile. Rates were higher for the young old (in this case, those between the ages of 60

***Senior Transportation.*** *Ninety-one-year-old Elsie Emslie sits behind the steering wheel of her car. Emslie has 75 years of experience behind the wheel of a car and takes an annual driving assessment offered through the Tampa Bay area's Getting in Gear program for older adults.* AP IMAGES.

and 64) and gradually decreased with advancing age. However, even for the very old (85 and older), more than three fourths of their trips were made by private automobile. Because the cost of providing alternative transportation has been so high, particularly in the United States, it is important for older persons to retain their driving privileges for as long as they can safely do so.

Historically research on older drivers has gone through several phases. In the 1970s, research questions focused on whether older drivers presented a safety risk to other road users by being on the road. Subsequently, researchers focused on identifying age-related risk factors for crash involvement. Although there was a predominant perception that older drivers represented a safety risk, from a population perspective there is no significant increase in crash risk until drivers reach the ages of 75 to 80 (Evans, 1988). Even though most older drivers are not at increased crash risk, there continues to be a focus on understanding the age-related changes that elevate risk on an individual level. Research has tried to balance safety concerns within the broader context of transportation and meeting the mobility needs of older adults. Topics of research include understanding how mobility changes with age and what factors influence these changes, identifying methods for detecting functional changes and correcting them when possible, and discovering how the transportation system may be altered to better serve older adults.

## CHANGES IN MOBILITY WITH AGE

As people grow older, they may experience declines in various modes of functioning. Specifically, sensory and cognitive abilities may be affected, which may impair mobility in general and driving in particular (Guralnik, Fried, & Salive, 1996). Mobility encompasses a range of abilities, from being able to move one's body, to the extent of one's life space (ranging from very constrained, such as living only within one's home, to unconstrained, such as traveling to other countries), to the avoidance of negative events such as falls and automobile crashes.

Many older drivers reduce their driving over time to avoid potentially challenging or bothersome driving situations or contexts in which they do not feel safe, such as driving at night, in the rain, or during rush hour (Ball, Owsley, Myers, & Goode, 1998). Such restrictions in driving habits, sometimes culminating in the decision to stop driving altogether (most often the decision to stop driving is a personal choice; however, the concern of others may weigh in this decision) can pose a threat to independence and may lead to isolation, depression, and reduced access to health care (Fonda, Wallace, & Herzog, 2001) and other resources that positively impact qualify of life, such as employment and social activities (Marottoli, Cooney, Wagner, Doucette, & Tinetti, 2000). Significant decreases in mobility can occur over periods as short as 3 years (Wood et al., 2005), and declining sensory and cognitive performance appear to be important predictors

of driving cessation and mobility decline (Edwards et al., 2008). Reduced mobility and any resulting social isolation can seriously undermine the quality of life for older persons and accelerate declines in personal health. With increasing concerns about rising health care costs, assuring accessible transportation for older persons could prove a beneficial investment.

## IDENTIFYING RISK FACTORS FOR DRIVING COMPETENCE

Older adults rely heavily on automobiles to maintain their mobility, and a driver's license is an important symbol of independence. However, older drivers (particularly those ages 75+) are involved in more traffic convictions, crashes, and fatalities per mile driven than most other age groups (Evans, 1988). Furthermore, due to increasing frailty, older adults are more likely to be killed or injured in a collision of equivalent severity than more robust younger persons (Hu et al., 2000). When injured, older adults have lengthier hospital stays and higher mortality rates (Sartorelli et al., 1999). Thus the older traffic injury victim represents a costly problem in terms of both acute and continued health care costs.

Because most individual older drivers are as safe on the road as middle-age drivers, it is important to understand the factors responsible for increased crash risk for some older persons. Many potential risk factors have been evaluated, including age itself, visual function, cognitive function, physical function, medical conditions, and medications. For example, the relationship between visual function and driving safety has become much clearer over the past 20 years. In general, normal age-related changes in visual function do not result in increased crash risk. Visual acuity, although necessary for reading distant road signs, is only weakly related to crash risk. Severe visual field loss in both eyes, although not common, elevates crash risk, as does contrast sensitivity loss (a measure of how faded or washed out an image can be before it becomes indistinguishable from its background) from cataracts, even if present in only one eye (Owsley, Stalvey, Wells, Sloane, & McGwin, 2001). Glaucoma and cataracts, when accompanied by visual function impairment, also have been associated with increased crash risk. Physical functioning can also impact driving behavior. For example, Richard Marottoli (1994) found that older persons with multiple lower limb abnormalities or who perform poorly on a rapid walk test had more self-reported crashes and citations.

Although adequate visual and physical functioning clearly are needed for safe driving, recent research suggests that cognitive factors play a significantly larger role in crash risk than visual sensory variables. With respect to visual information processing, an increasing body of work, including several large field studies with differing driving environments, has shown that impairments on a specific measure of the speed of processing, the Useful Field of View test is consistently a strong predictor of driving ability (Clay et al., 2005). This test measures the presentation of time needed to correctly identify and locate important visual information in the visual field. Thus someone who can process visual information quickly can respond to potential hazards across a larger visual area than an individual who processes information more slowly. Other cognitive measures, including tests of executive function, memory, and reasoning, have also been related to increased crash risk. Furthermore, although medical diagnoses themselves are not always good predictors of driving competence, some diagnoses or the medications used to treat them are helpful as triggers for a more comprehensive evaluation of the cognitive abilities they may impair.

## INTERVENTIONS TO MAINTAIN DRIVING COMPETENCE

Cataracts is the leading cause of visual impairment in older adults. Fortunately, cataract surgery has become common, and older adults who undergo cataract surgery are 50% less likely to be involved in a motor vehicle crash than those who need (but do not elect to have) the surgery (Owsley, Sloane, McGwin, & Ball, 2002). As a general rule, a reasonable strategy to help maintain driving competence is to aggressively treat all chronic medical conditions to promote public health and slow functional decline in an aging population.

Approaches to prevent cognitive decline, including exercise, nutrition, and cognitive training or brain fitness programs, have also received considerable study during the past decade. Research on cognitive training has shown that enduring improvements are indeed possible (Willis et al., 2006) and that improved driving abilities can result from such programs (Roenker, Cissell, Ball, Wadley, & Edwards, 2003).

Research suggests that the complex public health issue of older driver remediation necessitates a comprehensive approach. Such an approach might include retesting of drivers referred for assessment because of poor driving history, concern of family members, or physician request; expansion of voluntary programs that include driver assessment, education, training, referral for appropriate intervention, and counseling regarding driving cessation and alternative transportation; and insurance discounts as incentives for participation in such programs. Such programs are becoming more widespread.

## FUTURE DIRECTIONS

Research and its translation are now underway on many fronts: safer roadways, safer automobiles, better alternative transportation services, better driver regulation procedures,

greater access to proven driver rehabilitation programs, and the development of creative new partnerships for providing safe mobility to older people. Accessible transportation for older adults in the future will rely on actions taken by federal agencies, Congress, and states, counties, and cities. Older persons, caregivers, social agencies, insurance companies, airlines, bus operators, and local businesses need to anticipate and adapt to the changing demographics and resulting needs for transportation, and particularly for the preferred mode of transportation, driving.

Public policy aimed at promoting referral-based driver assessment, fostering the development of effective interventions, and supporting the creation and expansion of voluntary driver improvement programs would go a long way toward improving the safe mobility of older adults. The American Association for Retired Persons has a educational senior driver program, attendance of which results in an insurance discount. Posit Science Corporation has a cognitive training program called Insight that is based on the speed of processing training. This company is working with insurance partners to make the program available to their insured older drivers. Although the need for action in these areas is driven by the aging population, the results ultimately will improve safety and mobility for all age groups.

**SEE ALSO** Volume 3: *Aging; Cognitive Functioning and Decline; Disability and Functional Limitation, Later Life; Media and Technology Use, Later Life; Sensory Impairments.*

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***Karlene Ball***

# OLDEST OLD

Of increasing interest to researchers are elders considered to be very old. Their position as the fastest growing segment of the older population and status of having exceeded their life expectancy have fostered interest in understanding who they are and how they differ from those in young-old age groups. Yet to date, most research has been at the descriptive level concerning people in the United States, Germany, and Sweden. Theoretical developments in psychology and sociology have broadened the understanding of these elders, underscoring their unique position in the age structure.

## WHO ARE THE OLDEST OLD?

Although age 65 is the socially constructed and recognized milestone determining old age since 1935, the average life span has increased 20 years since then in developed countries

(United Nations Division for Social Policy and Development, 2003). In reaction to this increasing lifespan, some scholars have pointed out the need for finer gradations of *old*, defined as the young-old and oldest old (Neugarten, 1974; Laslett, 1991). Two common means exist for defining the oldest old for the purpose of empirical research. The first approach defines the oldest old category as the time point at which 50% of a birth cohort has died. In developed countries, this would be age 80. Another demographic approach to defining the oldest old is more differentiated and begins where half of those in a birth cohort who have reached age 50 or age 60 have died. The average age for the oldest old group would then be 85 in developed countries (Baltes & Smith, 2002). With various definitions of oldest old, a need has been recognized for a consistent definition to promote research on this specific age group.

**Historical Development of the Oldest Old Age Group in the United States** In 1900, men and women who were 65 years old could expect to live an additional 12 years, with 13% reaching the age of 85. By the year 2000, 42% of those reaching age 65 could expect to live to age 85 (Costa, 2003). One explanation for this increase in life expectancy is a reduction in risk factors and adversities such as infectious disease, poor nutrition, low socioeconomic status, and occupational accidents that can lead to early death or impaired functioning. Findings from a study that explored these early factors suggest that up to one-fifth of the increase between 1900 and 1999 in the probability of someone aged 65 living to age 85 may be due to improvements in early life conditions. The remaining increase can be attributed in part to improvement in medical care, decline in pollution, rise in refrigeration and reduced use of salt as a food preservative (Costa, 2003). Costa suggests that reduction in mortality for future cohorts will be tied to further innovation in medical care as there are fewer early life insults with the exception of pollution.

## SIGNIFICANCE OF THE OLDEST OLD

An increase in life expectancy and decline in fertility have contributed to an aging society in developed countries. With the aging of the baby boomers, American society has grown old rapidly, resulting in a dramatic increase in the demographic projections for the oldest old. Whereas the age group 85 and older increased by 274% between 1960 and 1994, those over 65 years old increased 100% and the entire U.S. population increased only 45% in that same period. By 2020, there will be 7 million people aged 85 years and older in the United States (U.S. Census Bureau, 2003). Figures 1 and 2 display the population distribution by age over a 200-year period (1880–2080). It is clear that the coming decades will bring many more people into the very old age groups and fewer into the younger age periods.

This increase in numbers of the very old comes with an attendant increase in the need for services. Significant increases in the prevalence and incidence of senile dementia among the oldest old as well as the greater level of physical dependence due to increased limitations in activities of daily living have imposed a great burden on both informal caregivers and the public health care system. This burden will only increase as the number of very old people increases.

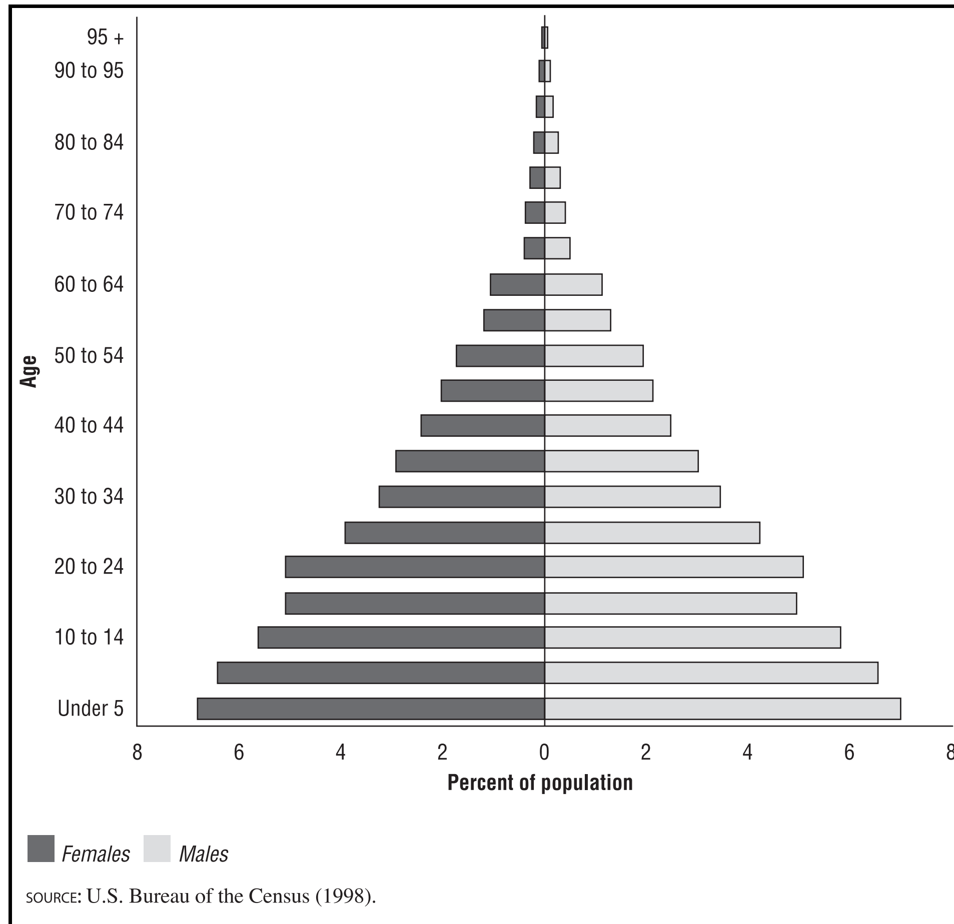
## IMPORTANT THEORETICAL PERSPECTIVES ON THE OLDEST OLD

Although multiple losses through the death of friends and family as well as physical and social decline may be considered almost normative transitions among the very old, this view is not universal. Other perspectives emphasize positive characteristics of growing old such as wisdom, generosity, and self-acceptance. A lifespan developmental view is a perspective that emphasizes development throughout life, even into very old age. This perspective views all stages as being important and as incorporating a balance of gains as well as losses.

This positive perspective has also prompted theorists to view aging in terms of success. Originally developed in the 1980s, successful aging was portrayed as a complex process involving personal, social, and environmental factors. In the 1990s, researchers proposed two levels of successful aging, one for the young-old and one for the oldest old.

Other gerontological theories also have contributed to the understanding of successful aging. *Socioemotional theory* (Carstensen, 1993) views the reduction in social networks and social contacts in later life in a positive light. As elders come closer to the end of their lives, they choose to spend time with fewer people. They prefer to interact with those they feel close to and with whom they have an emotional bond. The selection, optimization, and compensation (SOC) model (Baltes, 1997) provides an explanation for how older people use selective compensatory efforts to deal with deficits, as they begin to experience cognitive decline. Goals are selected and pursued within the context of existing ability. With increasing levels of frailty in this age group, Baltes and Smith (2002) suggest that successful aging in the oldest old group might be measured by the individual's ability to offset inevitable loss through selection, optimization, and compensation strategies.

Successful aging is also intertwined with resilience. With some evidence indicating that age-related decline can be minimized or reversed (Staudinger, Marsiske, & Baltes, 1995), resilience is an important component of aging.




SOURCE: U.S. Bureau of the Census (1998).

***Figure 1.*** *Population distribution by age and sex in the United States, 1880.* CENGAGE LEARNING, GALE.

Resilience is a construct that combines multiple domains: social, emotional, spiritual, cognitive, and physical. Many elders have a positive sense of well-being and demonstrate adaptability and resilience at any stage of life (Dyer & McGuinness, 1996; Staudinger, Marsiske, & Baltes, 1995).

## DEMOGRAPHIC DESCRIPTION

**Race and Ethnicity** Among the oldest old, the greatest percentage in 2002 were non-Hispanic Whites (86.4%), compared with Blacks (7%), those of Hispanic origin (4%), and Asians (1.8%), thus reflecting much less diversity than that of U.S. population as a whole. By 2010, the oldest old age group will be composed of 84.3% non-Hispanic Whites, 7.8% Blacks, 5.3% of Hispanic origin, and 2% Asians (U.S. Census Bureau, 2003). Compared with the race and ethnic distribution of the overall U.S. population, Whites are overrepresented and Blacks underrepresented among the oldest old, reflecting higher mortality rates among Blacks than in Whites.

**Marital Status** The pattern of marital status is changing with advancing age with declining numbers of married elders in the very old group. Although 63% of young-old aged between 65 and 74 are married and living with a spouse and 20% are widowed, 27% of the oldest old are married and living with a spouse and 53% are widowed. Among both groups, about 4% never married. Young-old are almost three times as likely as the oldest old to be divorced (9% and 3%, respectively; Kreider & Simmons, 2003). In addition to age, gender imbalance in life expectancy also influences marital status among the oldest old. Although 9% of women and 45% of men among the oldest old are married and living with their spouse in 2000, 72% and 35% are widowed, respectively. Oldest old men are five times as likely as their female counterparts to be married (Kreider & Simmons, 2003). This gender gap reflects both men's greater likelihood of dying and their greater likelihood of remarrying after widowhood, relative to their female counterparts.

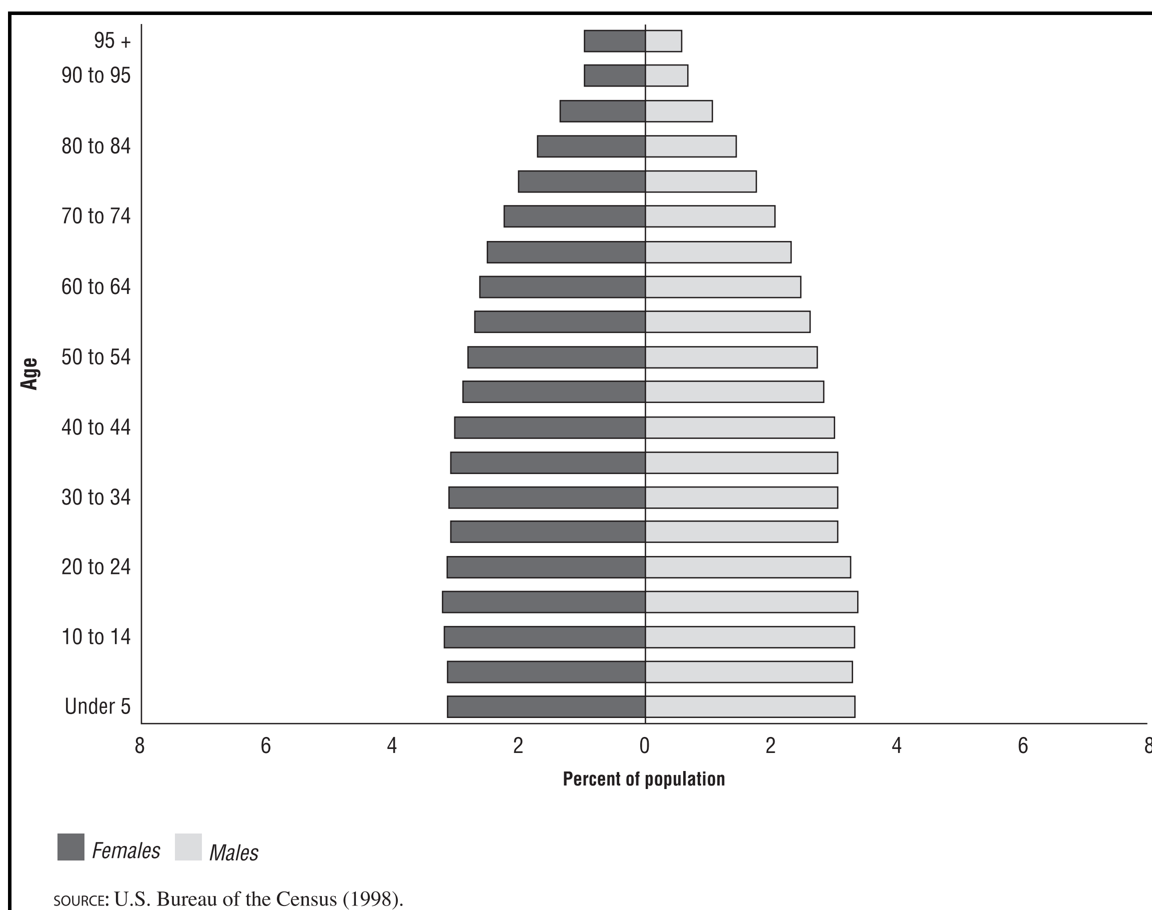



*Figure 2. Estimated population distribution by age and sex in the United States, 2080.* CENGAGE LEARNING, GALE.

**Living Arrangements** No national figures are available for people 85 years and older who live in the community. For those 75 years old and older in 2002, 40% of elders lived alone while 45% lived with a spouse and 15% lived with other people (U.S. Census Bureau, 2003). Even though similar proportions of elders aged 75 and older lived alone, for White and Black elders (40% and 39%, respectively) racial variations are present in living arrangements. Some 46% of White people who are 75 years old and older live with a spouse compared with 30% of elderly Black people. More Black elders age 75 and older live with other people (31%) compared with White elders (14%; U.S. Census Bureau, 2003). For Hispanic elders aged 75 and over, 25% live alone, 45% live with spouses, and 30% live with other people (U.S. Census Bureau, 2003).

Although most of the oldest old continue to live in the community, people in this age group constitute the largest proportion of residents of long-term care facilities. In 1999, 47% of such residents were among the oldest old, compared with 32% for elders aged between 75 and 84 years old and 12% for those aged between 65 and 74 years old (Bernstein, Hing, Moss, Allen, Siller, & Tiggle, 2003). Overall, though, the proportion of all elders living in long-term care facilities is declining. About 18% of the oldest old lived in such facilities in 2000, down from 25% in 1990 (Hetzel & Smith, 2001)

**Socioeconomic Status** The oldest old are more likely than young-old to be poor. The poverty rate was 15.3% for elders aged between 75 and 84 years old and 19.8% for the oldest old in 1995 (U.S. Bureau of the Census, 1996). In addition, economic status varies widely by gender and race. The poverty rates range from 19.7% for oldest old women living in metropolitan areas to 31.6% of those living outside metropolitan areas. Oldest old men living inside metropolitan areas reported lower poverty (12.1%) than those living outside metropolitan areas (20.8%; U.S. Bureau of Census, 1996).

Living arrangement is also related to poverty among the oldest old. Both men and women living alone are

more likely to be poor than those living in families. Among Black oldest old living alone, 67.8% of women and 53.2% of men are living in poverty (U.S. Bureau of the Census, 1996).

Educational attainment, one of the crucial determinants for socioeconomic status, is lower among the oldest old than young-old. In 2002, 61% of oldest old men and 57% of oldest old women had at least a high school education whereas 73% of men and 74% of women aged between 65 and 74 years old completed high school (Smith, 2003). Even though no significant gender difference exists in the proportion of high school graduates, elderly men received more college education than elderly women. (Smith, 2003). These patterns reflect cohort differentials, whereby more recent cohorts achieved more schooling than their predecessors.

## SOCIAL AND PSYCHOLOGICAL DIMENSIONS OF THE OLDEST OLD

**Physical Health** Chronological age may have a more significant influence on health for those older than age 85 than for younger age groups (Friedrich, 2001). Although younger age groups vary widely, the oldest old show more consistent decreases in physical health and cognitive abilities. A study suggests that a decrease in health and well-being may slow down after reaching age 95 (Kulminski, Ukraintseva, Akushevich, Arbeev, Land, & Yashin, 2007). Drawing on longitudinal findings from the Berlin Aging Study where behavioral and social changes were reported on this age group, Baltes and Smith (2002) noted that the oldest old display a "level of bio-cultural incompleteness, vulnerability and unpredictability. The people in this age group are at the limits of their functional capacity, a state that makes them very different than all other age groups" (p. 2).

**Social Networks** The young-old list significantly more people in their social networks than do the very old (Smith & Baltes, 1999) because the very old are less socially embedded than younger adults are. In examining social contacts among young-old and very old people, Field and Minkler (1988) found that involvement within the family and friendship patterns does not change over time for the young-old or very old. Another longitudinal study (Dunkle & Haug, 2001) found similar results. Although many women are without spousal support because they have been widowed, they have confidants, family, and friends who are available to provide support.

## PSYCHIATRIC ILLNESS

Elders who are in the oldest old age group are at higher risk for mental disorders due to multiple functional disabilities, medical illness, and increasing vulnerabilities to various stressors with age, resulting from declining health and dwindling social relationships. The oldest old dwelling in the community report higher levels of depressive symptoms than their young-old counterparts (Blazer, 2000; Blazer, Burchett, Service, & George, 1991; Stallones, Marx, & Garrity, 1990). Even so, no clear age-related trend was present in the prevalence of depression in old age as found in a German sample in which the age of the subjects ranged from 70 to 100 (Helmchen, Baltes, Geiselmann, Kanowski, Linden, Reischies, Wagner, Wernicke, & Wilms, 1999). Conflicting evidence from a longitudinal study among the oldest old (Dunkle & Haug, 2001) suggests increasing depressive symptoms over a 9-year period from ages 85 to 94.

Worry, a common issue for older people, is a significant factor influencing mental health. Consistent with other studies including predominantly young-old participants (Skarborn & Nicki, 1996), for the oldest old, worry was strongly associated with depressive symptoms and poor mental health (Dunkle & Haug, 2001; Roberts, Dunkle, & Haug, 1994).

## PSYCHOLOGICAL AND COGNITIVE FUNCTIONING

With advanced old age, more old people show decline or dysfunction in several aspects of psychological functioning. The BASE (Berlin Aging Study) data show that advancing age negatively affects intellectual performance, which subsequently affects subjective well-being. The effect of age is not so great in other psychological arenas such as self, personality, and social relationships. In general, older adults are less responsive to social expectations and can behave more in accordance with their feelings.

Memory, a major component of cognitive functioning, remains relatively intact until the late stages of cognitive decline, which is more prevalent among the very old, especially those with limited formal education. These very old elderly with poor cognitive function experience an accelerated decline in cognitive function and increased susceptibility to senile dementia. In particular, Alzheimer's disease affects predominantly the oldest old and increases even in advanced ages, frequently leading to institutionalization. It is also related to social class membership. Members of the lower classes are more frequently diagnosed with senile dementia than those of higher classes even when education is controlled (Helmchen et al., 1999). In 2000, 1.8 million people aged 85 and older had Alzheimer's disease, comprising 40% of 4.5 million people with Alzheimer's disease. This number of the oldest old with Alzheimer's disease is expected to increase to 8 million by 2050 (Hebert, Scherr, Bienias, Bennett, & Evans, 2003).

## FUTURE DIRECTIONS

Important considerations for future research include clarification of the definition of the oldest old group, and the need for further research using nationally as well as internationally representative samples with attention to racial/ethnic subgroups, as well as differentiation between those aged between 85 and 99 and those of centenarians. To date, most research has been of a descriptive nature, attempting to demarcate those older than 85 years of age from those younger. Further research is needed to connect behavioral observations and the social context of the oldest old to understand the mechanisms that support quality of life for these elders.

**SEE ALSO** Volume 3: *Age Structure; Aging; Baltes, Margret and Paul; Centenarians; Frailty and Robustness; Global Aging; Neugarten, Bernice; Wisdom.*

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***Ruth E. Dunkle***

# P-Q

## PAIN, ACUTE AND CHRONIC

Pain is defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage" (Price 1988, p. 6) and is "whatever the patient says it is, existing whenever the patient says it does" (McCaffery & Beebe 1989, p. 7). These definitions highlight pain as a multidimensional and subjective phenomenon.

Several different types of pain exist. The most basic distinction is whether pain is acute or persistent (sometimes referred to as chronic). *Acute pain* results from injury, surgery, or disease-related tissue damage (Panda & Desbiens, 2001), is typically brief, subsides with healing, and is usually associated with autonomic activity (e.g., tachycardia, which is an accelerated heartbeat, and sweat). Conversely, *persistent pain* is typically prolonged (lasting more than 3–6 months), may or may not be associated with a diagnosable disease process, and autonomic activity is usually absent (American Geriatrics Society, 2002; Harkins, 2002; Panda & Desbiens, 2001). Persistent pain can lead to functional loss, reduced quality of life, mood disruptions, and behavior changes, especially when untreated (Gordon, Pellino, Miaskowski, McNeill, Paice, Laferriere, & Bookbinder, 2002). Persistent and acute pain often coexist among older adults due to high rates of comorbidity.

### PREVALENCE

Physical pain is a significant problem for many older adults, affecting an estimated 50% of community-dwelling older adults and 85% of long-term care facilities (American Geriatrics Society, 2002; Herr, 2002; Sha, Callahan, Counsel, Westmoreland, Stump, & Kroenke, 2005). The high prevalence rate is related to the high rate of chronic health disorders among older adults, particularly painful musculoskeletal conditions such as arthritis (Helme & Gibson, 1999). A high prevalence of more acute conditions, such as cardiovascular disease, infection, and other painful diseases and syndromes, also exists in this age group (Feldt, Warne, & Ryden, 1998). Cancer, in particular, is associated with significant pain for a third of patients with active disease and two-thirds with advanced disease (Reiner & Lacasse, 2006). Huffman and Kunik (2000) found that of 86% of rural community-dwelling older adults reporting pain during the previous year, 59% reported multiple pain complaints. Thus, pain among older adults is common and is often complicated by co-occurring presence of different types, locations, and causes of pain.

### HOW AND WHY SOCIAL SCIENTISTS STUDY PAIN

Social scientists study pain for several reasons. Pain has major implications for older adults' health, functioning, and quality of life (American Geriatrics Society, 2002) and is associated with depression, withdrawal, sleep disturbances, impaired mobility, decreased activity engagement, and increased health care use (Gordon et al., 2002; Herr, 2002). Other geriatric conditions commonly exacerbated by pain include falls, weakness, malnutrition, difficulty walking, and slowed rehabilitation (American Geriatrics Society, 2002; Gordon et al., 2002). Hence pain has implications for physical, functional, and mental health among older adults, concepts that social scientists frequently investigate. In 2001 the Joint Commission on

Accreditation of Health Care Organizations (JCAHO) recognized pain assessment as the fifth vital sign and required health care professionals to evaluate and document pain assessment systematically. This policy change is relevant for medical sociologists who track trends in health and who may observe its impact in prevalence or consequences of pain across the life course.

## STUDY OF PAIN OVER THE LAST SEVERAL DECADES: MAIN PAIN MEASUREMENT TOOLS

As fundamental human experiences, pain and relief of pain have been a focus of daily life and medical care for centuries. Medical study of pain began in the 1800s with the advent of anesthesia, but interdisciplinary study was not initiated until the 1970s with the formation of the International Association for the Study of Pain and the American Pain Society. Pain studies in older adults began in the 1990s, followed by a growing body of research on physical and mental health consequences of pain in elders and measurement issues.

Patients' self-reports of pain are considered the gold standard, because no biological test exists. Although pain is multidimensional, few assessment tools evaluate all of these dimensions. The McGill Pain Questionnaire is one commonly used, comprehensive tool that measures pain affect and evaluation (through 78 word descriptors), pain location (using a body map), and pain intensity (based on a single question rating subjective pain on a six-point scale).

Pain intensity is the most commonly assessed dimension, measured with tools such as the visual analogue scale (VAS), the verbal descriptor scale (VDS), and the Faces Pain Scale (FPS) (Herr, 2002). The VAS, widely used in hospital settings, asks patients to rate pain intensity on a scale from zero to ten but requires ability to discriminate subtle differences in pain intensity, which may be difficult for some older adults to complete. Alternatively, the VDS asks patients to select a word that best describes present pain (e.g., no pain to worst pain imaginable), has been found a reliable and valid measure of pain intensity, and is reportedly easiest to complete and most preferred by older adults (Herr, 2002; Taylor, Harris, Epps, & Herr, 2005). The FPS, initially developed to assess pain intensity in children, has been used to measure pain intensity, particularly among cognitively impaired older adults. It consists of seven cartoon faces depicting least pain to most pain possible (Bieri, Reeve, Champion, Addicoat, & Ziegler, 1990). Among adults, the FPS is considered more appropriate than other pictorial scales because the cartoon faces are not age, gender, or race specific.

## ADVANCES MADE IN PAIN ASSESSMENT IN INDIVIDUALS WITH DEMENTIA

Recognition is growing about the problem of pain in elderly adults, particularly, in the difficulties associated with assessing and managing pain in elders with dementia. Patients with dementia cannot adequately report pain due to deficits in cognitive and verbal skills (i.e., confusion and impaired memory, judgment, attention, and language), which worsen as the disease progresses. No evidence exists, however, that this population physiologically experiences less pain than do other older adults (American Geriatrics Society, 2002). Instead, cognitively impaired elders may fail to interpret sensations as painful, are less able to recall pain, and may not be able to verbalize it to care providers (American Geriatrics Society, 2002). Thus, they are at risk for inadequately assessed and managed pain.

Because ability to self-report is diminished in persons with dementia, observational assessment of pain behaviors is necessary. Several measures have been developed to assess pain in persons with dementia. In 2006 Herr, Bjoro, and Decker completed a comprehensive state-of-the-science review of 14 existing measures and summarized their strengths and limitations. In general, pain behaviors include guarded movement, bracing, rubbing the affected area, grimacing, vocalizations, and restlessness.

Promising behavioral observation measures include the Pain Assessment in Advanced Dementia (PAINAD) (Warden, Hurley, & Volicer, 2003) and the Non-Communicative Patient's Pain Assessment Instrument (NOPPAIN) (Snow, Weber, O'Malley, Beck, Bruera, Ashton et al., 2004). Both are short, easy-to-use clinical tools for rating presence and intensity of pain among people with dementia. The PAINAD measures five pain indicators: breathing, negative vocalizations, facial expressions, body language, and consolability. The NOPPAIN measures pain noises, pain words, pain faces, bracing, rubbing, and restlessness. Preliminary studies suggest that both tools are reliable and valid measures (Taylor, Harris, Epps, & Herr, 2005; Warden et al., 2003). More recent data supported validity of the NOPPAIN against established microanalytic pain behavior analysis (Horgas, Nichols, Schapson, & Vieites, 2007).

When assessing pain in patients with advanced dementia, it is important to recognize that it is not possible to definitively determine an individual's pain through behavior alone (Horgas, et al., 2007). Instead, behavioral indicators should be used to trigger a comprehensive pain assessment protocol (Miller, Talerico, Rader, Swafford, Hiatt, Miller et al., 2005). The American Society for Pain Management Nursing's Task Force

on pain assessment in nonverbal patients (including patients with dementia) recommends a comprehensive, hierarchical approach, including the following: (a) self-report, (b) look for potential causes of pain, (c) observe patient's behavior, (d) obtain surrogate reports of pain or changes in patient's behaviors/activities, and (e) give pain medications and determine whether pain indicators are reduced or eliminated (Herr, Coyne, Key, Manworren, McCaffery, Merkel et al., 2006). The recent interdisciplinary expert consensus panel also supports the need for comprehensive pain assessment, including self-report, behavioral, and proxy measures in persons with dementia (Hadjistavropoulos, Herr, Turk, Fine, Dworkin, Helme et al., 2007).

## FUTURE DIRECTIONS

Pain researchers have made giant strides over the past few decades, recognizing prevalence and developing multiple strategies for measuring pain in older adults. Further work is needed, however, to determine the most useful tools for this population and evaluate their sensitivity to change over time or in response to treatment. Specifically for patients with dementia, more work is needed to develop and test strategies to alleviate pain because pharmaceutical studies typically exclude people with dementia from drug trials, preventing these vulnerable elders benefit of research outcomes (Ancill, 1995).

Moreover, little is known about pain assessment and treatment in subsections of the elderly population. For instance, how do race and sex differences in pain play out in late life? Does type of dementia influence pain expression? Does what we know about pain assessment in persons with dementia extend to other populations with intellectual and developmental disabilities or adults who remain noncommunicative for other reasons (e.g., communication difficulties as a result of a stroke)?

Pain, a common problem for older adults, has an important impact on the life course. Although much has been learned, more research and interdisciplinary collaboration are warranted to improve measurement and management of pain and to minimize deleterious outcomes associated with this phenomenon.

**SEE ALSO** Volume 3: *Arthritis; Chronic Illness, Adulthood and Later Life; Dementias; Disability and Functional Limitation, Later Life; Hospice and Palliative Care; Mental Health, Later Life.*

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# PARENT-CHILD RELATIONSHIPS, LATER LIFE

Relationships with adult children are among the most significant sources of emotional support and assistance for older persons, particularly for the widowed. The components of the relationship include the extent of contact and emotional support, exchange and assistance, and sometimes coresidence. Researchers have most commonly studied these bonds in terms of the positive association between parents and children but more recently are recognizing the potential for the simultaneous existence of conflict and ambivalence.

## SHARED AFFECTION AND CONTACT

Shared affection and contact are the cornerstones of intergenerational relationships. Most older persons have at least one child living nearby. Among those who do not live with their child, approximately three-quarters live within a 35-minute drive of at least one, and half have two children within this geographic range (Lin & Rogerson, 1995). Nearly 80% report weekly contact with at least one of their children. However, not all children live close by, and distant living is also common for elderly parents and adult children. Among those elders born prior to World War I, one quarter have no living child closer than 100 to 200 miles, and half have at least one child living more than 200 miles away (Climo, 1992). "Distant" children, those who are not geographically proximate, may not see their parents frequently, but the quality of the parent–child relationship is just as high as for those who live near one another (Rossi & Rossi, 1990). In other words, distance does not erode the relationship. The typical distant child visits twice per year. Whereas only 10% visit less than once per year, one-third visit three times per year or more. Average visits last for four days but range from one day to six weeks (Climo, 1992).

Scholars have identified three types of parent–child relationships: tight-knit, sociable, and detached. The most common types are the tight-knit and sociable. Tight-knit relationships are characterized by high levels of affection, opportunity to see one another, and exchange of resources. Sociable relationships also have high affection and opportunity to see one another but do not include an exchange of resources. However, tight-knit relationships are more common with mothers than fathers (31% of relationships with mothers versus 20% of relationships with fathers are tight-knit whereas 28% of relationships with mothers and 23% of relationships with fathers are sociable). In addition, relationships with fathers are more likely to be detached than relationships with mothers (27% versus 7%). These ties are characterized by low affection, few opportunities to see one another, and low exchange of resources. With increasing age, children and parents are more likely to have relationships that are sociable rather than tight-knit, reflecting a decrease in exchange of resources from parents to children (Connidis, 2001).

Intergenerational relationships tend to be heavily gendered. Women of both generations are more likely than men to maintain intergenerational relationships across adulthood (Fingerman, 2003). Overall children tend to feel closer to their mothers than to their fathers, and daughters report closer ties to both parents than do sons (Rossi & Rossi, 1990). In addition, women consistently express stronger filial norms than men from young adulthood to old age (Gans & Silverstein, 2006). However, gender differences in parental perceptions of relationships with sons and daughters are eliminated once a within-family analysis is used in current generations of parents whose first-born children are in middle school (Proulx & Helms, 2008). That is, few gender differences emerge in parents' perceptions of continuities and changes in their relationships with first-born children within individual families.

## EXCHANGE AND ASSISTANCE

Parents and adult children give and receive different resources. The flow of *financial* aid and services (such as babysitting) tends to be unidirectional, from parents to children. In contrast, parents seek companionship, appreciation, affection, and care giving from their children. Once adult children are married, the wife's parents tend to provide and receive more assistance than the husband's parents (Goetting, 1990; Lee, Spitze, & Logan, 2003; Shuey & Hardy, 2003). This is the result of parent–child relationships being embedded in a larger system of gender relationships, as discussed earlier (Proulx & Helms, 2008; Shuey & Hardy, 2003). Parental aid to married

***Woman Feeds Her Father.*** *Children often become caregivers to their elderly parents.* © ED KASHI/CORBIS.

children is most concentrated in the early years of marriage and decreases over time as adult children become more self-sufficient. Services to adult children tend to be highest when grandchildren are preschool age and in need of babysitting (Goetting, 1990).

Reciprocity tends to be at the root of filial responsibility. Adult children provide care for their elderly parents in exchange for all of the assistance and care that their parents gave to them while growing up (Connidis, 2001). Research from the early 2000s suggests, however, that filial norms tend to weaken after mid-life (Gans & Silverstein, 2006). They may peak at mid-life as a manifestation of filial maturity and then decrease as a result of parent care anxiety and an altruistic desire to spare younger generations from the burden of parent care. Whereas filial norms have weakened over historical time, they also have been strengthened recently in later-born generations: The baby boom generation that reached mid-life in the 1990s was more familistic than the period that they aged into, despite the opposite historical trend of weakening norms across time (Gans & Silverstein, 2006). This may be the beginning of continued high levels of familism in the subsequent generations..

## CORESIDENCE

Shared living arrangements are a third component of parent and adult child relationships. Approximately 16% of parents 60 years of age and older live with an adult child. However, these rates increase significantly beyond the age of 75 for women and age 80 for men and are highest for mothers over 90 years of age (Schmertmann, Boyd, Serow, & White, 2000). Older parents are more likely to move in with a child, usually a daughter, following a decline in health, income losses, or the loss of a former caregiver or spouse. Parents may also move in with children due to a desire for companionship (Wilmoth, 2000).

Contrary to popular expectations, coresidence is more a function of adult children living with parents than vice-versa. An adult child's need for support is a key motivator for living with parents. The growing trend for adult children to return to their parent's home has been termed the *refilling of the empty nest*. Returning home is considered appropriate for a divorced daughter, both with and without children, and for the period between finishing college and starting a full-time job or following unemployment (Mitchell, 2000). Children

who return home are expected to save their money and eventually seek independence. Coresident children also tend to provide more assistance to parents than those living on their own (White & Rogers, 1997). However, living together tends to increase strain between parents and adult children, particularly for younger children who are unemployed (White & Rogers, 1997).

## WHY ARE THEY IMPORTANT TO STUDY?

Relationships with one's parents and children are among the most important relationships that adults experience. Among a variety of types of relationships, adults rated their relationships with their parents and children as having the highest levels of obligation (Rossi & Rossi, 1990). They are a central source of satisfaction across the life course and, along with marriage, form the bedrock of the family. This is evidenced by the fact that adults most often spend holidays and major celebrations with their parents (or parents-in-law) and children (Merrill, 2007). As stated earlier, parents and adult children are also an important source of exchange and assistance to one another. Parents are the most likely sources of financial assistance and help with babysitting to adult children and their families while they are gaining independence. Likewise, as parents grow older, it is their adult children who are most likely to provide companionship and assistance to them as they become more limited in the tasks that they can perform.

Relationships between mothers and adult daughters are the most widely studied of the intergenerational relationships (Fingerman, 2003). This is a reflection of women's continued kin-keeping roles in the family and the relative importance of family in women's lives. These relationships are believed to be closer than any other family bonds. Studies focus on communication between mothers and daughters and even on mother-in-law and daughter-in-law relationships (Merrill, 2007).

## TRENDS AND PATTERNS

The exchange of resources between parents and their adult children differ somewhat by race and class. Whereas parents from the middle class are more likely to provide financial help to their adult children, working-class families are more likely to provide hands-on services to one another such as babysitting for grandchildren and caring for elderly family members. Coresidence, whether with parents or parents-in-law, is also more common in the working class due to reduced incomes (Goetting, 1990). Black and White children are more likely to help their parents financially relative to Hispanic children even when holding income constant (Wong, Capoferro, & Soldo, 1999). In addition, Asian Americans and African Americans endorse norms of intergenerational assistance to older kin more than do European Americans and Latinos (Coleman, Ganong, & Rothrauff, 2006).

Support and affective ties also change over the life course. Support to adult children is at its peak when grandchildren are preschool age and adult children need greater assistance. Parents assume and expect that their adult children will become increasingly independent as they grow older. Affection between parents and children is at its lowest when children are adolescents and then peaks when children are in their 20s. It drops off slightly again before leveling off when children are in their 30s (Rossi & Rossi, 1990). For both parents and adult children, one's satisfaction in the relationship is strongly associated with the belief that the other person is independent.

There has been an historical trend toward an increase in the number of years that parents and adult children spend with one another, due to an increase in life expectancy. Longer life expectancy also has resulted in an increase in the number of generations living at any one time. However, there has not been the expected increase to four or five generations living simultaneously, due to older ages at marriage and at first birth among recent cohorts of adults (Connidis, 2001).

## THEORIES OF INTERGENERATIONAL RELATIONSHIPS

The main theory driving research on parent and adult child relationships is referred to as the *intergenerational solidarity perspective*. This theory, which focuses on the solidarity or strength of intergenerational bonds, states that solidarity has six separate components:

1. associational solidarity (the type and frequency of interaction and activities);
2. structural solidarity (opportunities for and barriers to interaction);
3. functional solidarity (the exchange of assistance and support);
4. affectual solidarity (intimacy and distance);
5. consensual solidarity (the agreement between generations on opinions and values);
6. normative solidarity (the extent to which family members share expectations of family life).

Since its inception, however, scholars have criticized the model for its emphasis on family cohesion without recognition of conflict between parents and adult children. As a result, the model has been modified to become the *family solidarity-conflict model*. This version of the model recognizes that conflict is a normal aspect of

family relations and that it influences both how family members perceive one another and their willingness to help one another (Bengtson, Giarrusso, Mabry, & Silverstein, 2002). Solidarity and conflict are not seen as separate ends of a single continuum, however. Family relationships can exhibit both high solidarity and high conflict simultaneously, or low solidarity and low conflict.

The most recent concept used in studying parent–child relationships in later life is referred to as *ambivalence* (Bengtson, Giarrusso, Mabry, & Silverstein, 2002; Connidis & McMullin, 2002). It refers to the contradictions in relationships such as the presence of both conflict and solidarity or positive and negative sentiments. Connidis and McMullin argued that life-course scholars need to examine conflict as a separate dimension of relationships beyond incorporating it into normative assumptions of solidarity. For example, they argued that there is conflict embedded in the social structure, such as the organization of family and work based on gender, which affects relationships.

## THE FUTURE

Parent–child relationships in later life are different from earlier stages in the life course. They are affected by a long joint history and a shared experience of life-course stages. Parents and children share a history of fulfilling support and exchange of resources to one another, although norms of filial obligation decrease after adults reach mid-life. Filial anxiety about care-giving may increase in the future if older parents and spouses need assistance simultaneously.

Family relationships, including those between parents and children, are growing more complex in recent generations, given the high levels of divorce and remarriage. Now family members have not only their own biological parents and children to turn to in their kin network but also a growing web of stepparents and stepchildren as well as both current and former in-laws. Research on parent and adult children relationships is moving in the direction of examining the nature of such bonds and differences in support and exchange as a result (Lee, Spitze, & Logan, 2003). For example, although a good deal is known about relationships between young children and their stepparents, there is far less information about those relationships in later life or about relationships with newly married older parents and their partners.

In the future, research will look more toward the overlapping life trajectories of parents and their adult children. As parents and adult children live longer, they share more life-course experiences such as grandparenthood. Adult children will also have more years with healthy elders than ever before, which may result in interesting new findings in parent–child relationships.

**SEE ALSO** Volume 3: *Caregiving; Family and Household Structure, Later Life; Grandparenthood; Intergenerational Transfers.*

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# PENSIONS

Pension plans are fringe benefits offered by some employers to provide workers with cash payments on retirement. In 2006 about 24% of Americans age 65 and older received pension benefits from past private-sector employers, and about 11% received benefits from past public-sector employers (Purcell, 2007a). Median annual benefits in 2006 were about $7,200 among older adults receiving private pensions and $14,400 for those receiving pensions from government employers (Purcell, 2007a).

Two basic types of employer-sponsored pension plans are now prevalent. Defined benefit (DB) plans, formerly the most common type, promise specific monthly retirement benefits that usually continue until one's death. Defined contribution (DC) plans, which are now more common, function essentially as individual tax-deferred retirement savings accounts to which both employers and employees usually contribute. Cash balance plans are hybrids that combine features of DB and DC plans. Each plan type affects individual retirement incomes and employer costs differently and raises distinct research and policy issues.

## HOW BENEFITS ACCUMULATE

DB plans base payments on formulas that usually depend on earnings and the number of years an individual worked for his or her employer. A typical formula in the private sector sets annual benefits equal to 1% of average annual salary for each year of service. For example, someone who worked 25 years for an employer would earn 25% of his or her salary during retirement. Most public-sector plan formulas are more generous, with typical multipliers of around 1.5%. Sometimes the earnings base includes all years that the participant worked for the employer, but more commonly it includes only the most recent years, such as the past five. A few plans set benefit payments equal to some fixed annual amount per year of service, regardless of earnings.

DC plans do not promise specific retirement benefits. Instead, employers that provide 401(k)-type plans—the most common type of DC plan—contribute to a retirement account in the participant's name; the amount of the contribution is typically a specific percentage of salary. Other DC plans include deferred profit-sharing plans and employee stock ownership plans. Only private for-profit firms may offer 401(k) plans, named after the section of the tax code that governs them. Equivalent plans are known as 403(b) plans in the nonprofit sector and 457(b) plans in the public sector. Employees may also contribute to their retirement accounts and defer taxes on their contributions until they withdraw funds from their accounts. Employer contributions sometimes depend on how much the participant contributes. For example, some employers match worker contributions up to a specific amount, providing few benefits to employees who contribute little to their retirement plans. Account balances grow over time with contributions and investment returns.

Hybrid pension plans combine features of DB and DC plans. In cash balance plans, the most common type of hybrid plan, employers set aside a given percentage of salary for each employee and credit interest on these contributions. Interest credit rates are generally tied to some benchmark, such as the U.S. treasury bill rate. Benefits are expressed as an account balance, as in DC plans, but these balances are only bookkeeping devices. Plans pay benefits from funds invested in a pension trust on behalf of all participants.

In all plan types, participants must usually remain with the employer a specific number of years before their benefits *vest*, meaning that ownership transfers from the employer to the employee. Federal law limits the vesting period. According to the Employee Retirement Income Security Act (ERISA) of 1974, benefits in most private-sector DB and hybrid plans must fully vest within 5 years if vesting occurs all at once or 7 years if it occurs gradually over time. In private-sector DC plans, employer contributions must fully vest within 3 years, or 6 years if vesting occurs gradually. Employee contributions, however, vest immediately and never revert back to the employer. Federal law does not limit vesting periods in state and local government plans; 5- or 10-year vesting is common in the public sector.

## BENEFIT RECEIPT

DB plan benefits are generally paid in monthly installments to retirees who have reached the plan's eligibility age and continue until the retiree's death. Surviving spouses also receive benefits unless both partners waive

survivor protection in exchange for higher payouts while the plan participant is alive. Federal law generally requires DB plans to offer these payment schemes, known as lifetime annuities, although some DB plan sponsors permit retirees to receive benefits as lump-sum payments. Few private-sector plans adjust benefits paid during retirement for inflation, so that the pension's purchasing power plunges over time for many retirees. If the price level increases 3% every year, for example, the real value of the pension benefit received at age 80 for a retiree who began collecting at age 60 would amount to only 55% of the original benefit's value. However, cost-of-living escalators that increase annual pension payments at the same rate as the growth in the consumer price index are common in the public sector. Most DB plans also pay reduced benefits to participants who retire before the plan's normal retirement age and have reached the early retirement age set by the plan. (Some employers offer disability benefits to employees who are forced by health problems to stop working before reaching retirement age, but these plans are less common than retirement plans.)

Cash balance plans must also offer a lifetime annuity with an expected value equal to the participant's account balance. Most participants, however, choose to receive their benefits as lump-sum distributions (Schieber, 2003).

DC plan beneficiaries receive the funds that have accumulated in their accounts, generally as lump-sum distributions—either a one-time payment or a series of payments over a set period. Few DC plan sponsors offer annuities. Beneficiaries can use their account balances to purchase an annuity from an insurance company, but few people do so, partly because the terms offered by insurance companies are not very favorable.

DC plan participants can collect whenever they separate from the employer. Distributions received before age 59 and one-half years, however, are subject to a 10-percent penalty, unless they are rolled over into an Individual Retirement Account (IRA) or lifetime annuity. Many plans allow departing employees to keep their balances in the plan and withdraw at a later date. People must begin withdrawing from their 401(k) plans after they reach age 70 and one-half years, unless they are still working.

Benefits from DB, cash balance, and DC plans are generally subject to ordinary income tax when they are received. Participants may, however, deduct any after-tax contributions they made to the plan.

## COVERAGE RATES

In 2007, 51% of private-sector workers—about 57 million people—participated in employer-sponsored retirement plans (Bureau of Labor Statistics [BLS], 2007b). (This total excludes the self-employed, workers in private households, and government workers.)

In the public sector, pension coverage is nearly universal (Munnell & Soto, 2007a). Private-sector coverage rates are higher among unionized workers and full-time workers and lower among low-wage workers, Blacks, and Hispanics, who are more likely to work in less-skilled occupations than other social groups. In 2006, for example, 55% of non-Hispanic Whites participated in employer-sponsored pension plans, compared with only about 44% of Blacks and 28% of Hispanics (Purcell, 2007b). Coverage rates are similar for men and women.

## CHANGES IN COVERAGE

Although overall pension coverage rates among private-sector workers remained fairly steady over the last quarter of the 20th century, a dramatic shift from DB to DC plans took place. Between 1980 and 2007, the share of private-sector workers participating in DB plans fell from 39 to 20%, whereas the share participating in only DC plans increased from 8% to 31%. Assets in private DC plans nearly doubled between 1997 and 2007, growing from $2.3 trillion to $4.4 trillion, whereas private DB plan assets increased only modestly, rising from $1.8 trillion to $2.4 trillion (Investment Company Institute, 2007). Private-sector DB plan coverage remains high, however, among unionized workers (67%) and workers in firms with 100 or more employees (32%; BLS, 2007b). The decline in the heavily unionized manufacturing sector, increases in the administrative costs of complying with the complex federal regulations that govern DB plans, and accounting rule changes that now require employers to report pension liabilities on their balance sheets have contributed to the erosion in DB plan coverage (Gustman & Steinmeier, 1992; Munnell & Soto, 2007b; Munnell & Sunden, 2004).

Conversions to cash balance plans, which are classified as DB plans for legal and regulatory purposes, have compounded the decline in traditional DB plans. Cash balance plans, which did not exist before 1985, provided coverage for 23% of all private-sector workers in DB plans in 2005 (BLS, 2007a).

DB plans continue to dominate in the public sector, which employs about one sixth of the workforce. In 2004, 86% of state and local government employees and nearly all federal government employees participated in defined benefit plans (Munnell & Soto, 2007a). The federal government and some state and local governments also offer supplemental DC plans. As of 2007, recent efforts by some jurisdictions, including the state of California, to move to DC plans have not been very successful, primarily because of the opposition of powerful public unions.

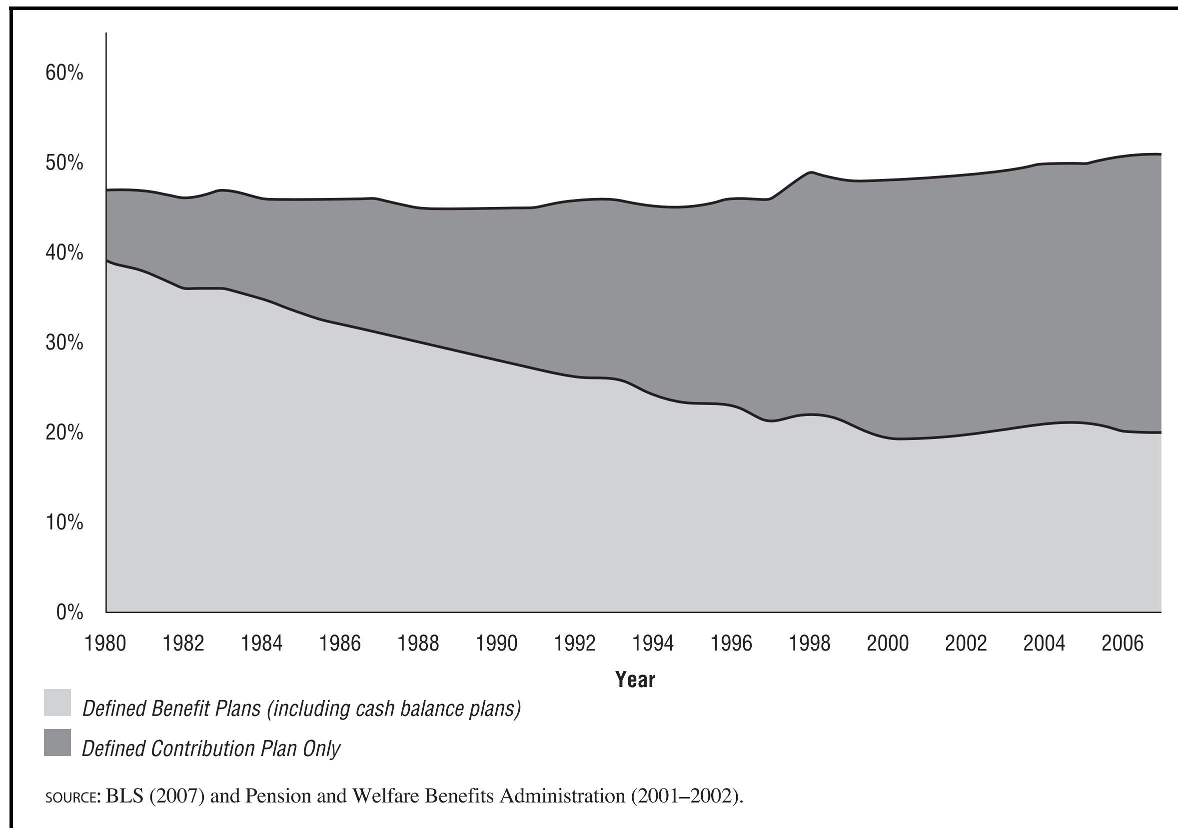


***Figure 1.*** *Percent of private wage and salary workers participating in employer-sponsored retirement plan, by plan type, 1980–2007.* CENGAGE LEARNING, GALE.

## KEY RESEARCH ISSUES

An important research question is the impact of pensions on retirement decisions. Most traditional DB plans, which became popular in the 1960s and 1970s when many employers wished to hire younger, lower-paid workers, encourage early retirement, and penalize workers who remain on the job after they become eligible to receive pension benefits. DB benefit formulas typically pay more for more years of service, but workers forego a year of retirement benefits for every year that they remain on the job past the plan's retirement age. The increase in annual benefits from an additional work year does not fully offset the loss from the reduction in the number of pension payments, thus lowering lifetime benefits. These retirement incentives are becoming counterproductive as the workforce ages and firms strive to retain older workers.

DC and cash balance plans do not discourage work at older ages because they express benefits as account balances that can continue to grow throughout the worker's career. In fact, workers in DC plans generally retire about 2 years later than those in DB plans (Friedberg & Webb, 2005).

Another key question is how the decline in traditional DB plans affects retirement security. There are advantages and disadvantages to both DB and DC plans, and the net effect of the shift to DC plans is not yet clear. By providing a guaranteed benefit that lasts from retirement to death, DB plans offer retirement income security for workers who remain with a single employer for most of their careers.

However, workers who often change employers and those with spotty work histories do not earn many benefits in DB plans. DB plan benefits accumulate rapidly in the years immediately before retirement age. Additional work years increase benefits by adding an additional percentage of pay and by raising the value of previously accumulated benefits by both real wage growth and inflation. Consider, for example, a worker with 30 years of tenure with her employer who earns $80,000 per year and participates in a DB plan that provides a pension equal to 1% of final salary for each year of service. If she works 1 more year at the same salary, her annual pension will increase by $800 (i.e., 1% of $80,000). If her salary increases by 5% the next year, then her annual pension will grow by $800, plus an additional $1,240 (5% of $80,000, multiplied by 0.31). Consequently, workers in DB plans

generally lose substantial benefits if they are laid off or if the firm goes out of business late in their career. The federal government insures DB benefits that have already been earned (see sidebar on the Pension Benefit Guaranty Corporation), but participants forego the rapid run-up in pension benefits that they would have received if they remained employed until the plan's retirement age.

Workers in DC plans, by contrast, do not necessarily lose benefits if they change jobs because their account balances can continue earning investment returns after they separate from their employer. DC plans, then, are well suited to the early 21st century's increasingly mobile workforce.

DC plan participants face other kinds of risks, especially the uncertainty surrounding investment returns. Workers with bad investment luck or who make unwise choices may end up with little retirement income. Another drawback is that workers generally must sign up with their employer to participate in DC plans, and then they must agree to have funds withheld from their paycheck. Only 77% of eligible private-sector workers at firms that offer DC plans participated in 2007 (BLS, 2007b), and only 6% contributed the maximum amount allowed by law in 2003 (Kawachi, Smith, & Toder, 2006).

To accumulate substantial retirement savings, DC plan participants must also resist the temptation to cash in their account balances when they change jobs. For example, only 45% of people age 21 to 57 in 2003 who received a lump-sum distribution from an employer plan rolled any part of it into another retirement account (Verma & Lichtenstein, 2006).

DC plan retirees also run the risk of spending their balances too quickly, leaving them with inadequate income at very old ages, or spending too slowly and not making the most of their retirement savings (Butrica & Mermin, 2007). DB plan beneficiaries do not generally face these risks, because most receive lifetime annuities that provide regular monthly payments from retirement until death. Relatively few employers allow DC plan participants to convert their balances into lifetime annuities, and annuities purchased from insurance companies are expensive because only those people who live the longest tend to purchase them.

Although the growing popularity of cash balance plans among employers has been controversial, these plans may provide more retirement security than either DC plans or traditional DB plans (Johnson & Uccello, 2004). Unlike traditional DB plans, benefits in cash balance plans accumulate gradually over the course of the career, enabling workers who change jobs frequently to accumulate substantial retirement benefits. They also contain many of the advantages of traditional DB coverage, including automatic enrollment, federal government insurance of benefits, and mandatory annuity options for benefit payout. Additionally, benefits in cash balance plans are subject to less investment risk than DC balances.

## PENSION BENEFIT GUARANTY CORPORATION (PBGC)

The federal government's Pension Benefit Guaranty Corporation (PBGC) insures private-sector defined benefit (DB) plans, including hybrid plans, assuming responsibility for pension payments up to a certain amount if the employer declares bankruptcy. It does not insure defined contribution plans. In 2007, PBGC guaranteed annual DB plan benefits up to $49,500 per participant to those who began collecting at age 65, but less to those who collected earlier. In return, plan sponsors must pay PBGC monthly premiums and adhere to specific funding requirements by setting aside money each year to cover expected future benefits.

Because of certain exceptions to the funding rules, however, many private-sector plans are underfunded, with insufficient reserves to cover expected payouts. In 2006 the shortfall among underfunded single-employer plans totaled $350 billion, about 28% of total liabilities (PBGC, 2006). Increased underfunding by private-sector plans raises PBGC's expected liabilities, weakening the agency's financial position. In 2007, PBGC's assets fell $14.1 billion short of expected liabilities, an improvement over 2006. Nonetheless, employer bankruptcies could force the PBGC to assume responsibility for many unfunded pension liabilities, threatening the agency's solvency and raising the possibility of a taxpayer bailout. The 2006 Pension Protection Act (PPA) tightened funding requirements and increased the insurance premiums paid by plan sponsors to fund PBGC, improving the agency's financial outlook. Added regulation could lead more employers to terminate their DB plans and further undermine traditional pension coverage, however.

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## KEY POLICY ISSUES

Attention has focused on boosting retirement savings for the nearly two fifths of private-sector workers employed

at firms that do not offer a retirement plan (BLS, 2007b). One approach has been the Saver's Credit, enacted by the U.S. Congress in 2001, which provides federal government matches of up to 50% of the first $2,000 in retirement savings by low-income adults. The government contribution, however, comes as a nonrefundable tax credit and thus does not benefit savers who do not earn enough to pay taxes.

Some proposals would expand the Saver's Credit by providing a refundable tax credit to low-income savers. Other proposals would require employers to allow workers to make payroll-deduction deposits to IRAs or 401(k) plans, perhaps with a government match. These proposals would not force employers to contribute.

Other efforts have focused on boosting DC plan participation and contributions among workers offered coverage by their employers. The 2006 Pension Protection Act (PPA) made it easier for employers to automatically enroll workers in DC plans, which can substantially increase participation rates (Choi, Laibson, Madrian, & Metrick, 2004; Gale, Iwry, & Orszag, 2006). Only about one third of employers automatically enrolled participants in 2007, although about half of remaining employers said they were at least somewhat likely to do so in the coming year (Hewitt Associates, 2007).

PPA also made recent increases in 401(k)-plan contribution limits permanent. In 2008 individuals may contribute up to $15,500 per year to their 401(k) plans, and participants age 50 and older may contribute an additional $5,000. Some argue that these limits should be raised even higher, but higher contribution limits do not appear to boost savings much (Kawachi et al., 2006). About 70% of the tax benefits from new DC-plan contributions in 2004 went to taxpayers in the top 20% of the income distribution, and more than half went to the top 10% (Burman, Gale, Hall, & Orszag, 2004).

Because few DC plans allow participants to collect their benefits as lifetime annuities, the decline in DB plan coverage may substantially reduce the future number of retirees with guaranteed payment streams outside of Social Security. One solution might be to promote deferred annuities that do not begin making payments until age 80 or 85 but then continue until one's death, insuring people against the risk of running out of money if they live to a very old age.

Improved financial literacy—people's ability to make appropriate decisions in managing their personal finances—is an important goal. As responsibility for retirement planning falls increasingly on families and individuals, the ability to make informed financial decisions is becoming more urgent. People need to decide how much to save in DC plans, how to invest their contributions, and how to convert their account balances into payment streams that will support them in retirement. Yet, only 43% of surveyed workers in 2007 said they have tried calculating how much money they will need for retirement, and many appear to underestimate retirement needs (Employee Benefit Research Institute, 2007). Financial literacy, generally measured by knowledge of financial terms and concepts, is particularly low among Blacks, Hispanics, and people with limited education. Better access to professional investment advice at work could improve retirement planning.

Other related policy initiatives have centered on efforts to improve phased retirement options. Many workers say they would prefer to switch to part-time work with their current employer as they grow older, rather than moving directly from full-time work to complete retirement (American Association of Retired Persons, 2003). However, few workers can afford to cut back their hours without collecting retirement benefits. Federal law limits employers' ability to make DB plan payments to active workers. PPA eased these restrictions, but most employers are still unable to pay DB plan benefits to workers on the payroll younger than age 62.

**SEE ALSO** Volume 3: *Policy, Later Life Well-Being; Retirement; Social Security; Wealth.*

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# POLICY, LATER LIFE WELL-BEING

The well-being of older adults is a consequence of lifetime experiences and may be shaped by such policies as public pensions and health insurance programs. Such policies contribute to the health and economic security of older people by instilling confidence that the resources one needs to maintain optimal levels of health and independence are available and secure. These policies include a range of public programs that depend on revenue (taxation) to (re)distribute income and provide services through public expenditures, with such programs generally comprising the largest social programs of national *welfare states,* both in the United States and throughout other developed countries as well.

Income security requires having sufficient income to meet individual needs and some discretionary purchases from a combination of public and private sources. National public pension systems, such as Social Security in the United States, provide direct universal benefits to pensioners in the form of regular guaranteed income (Social Security Administration, 2007). Income support to alleviate poverty is also a feature of many public pensions systems, usually provided through means-tested programs such as Supplemental Security Income (SSI) in the United States. Unlike universal entitlement to benefits under social insurance, eligibility for poverty-based programs usually requires individuals to meet a means-test by proving they have no resources to support themselves—virtually no assets of their own and insufficient income to meet subsistence needs—often a highly bureaucratic and demeaning process.

In most countries, tax policies provide an important source of fiscal welfare by offering preferential tax treatment for certain behaviors governments want to encourage, such as saving for children's higher education or retirement, buying health or long-term care insurance, or purchasing a home. For example, this includes lowering taxes on personal income (known as tax expenditures or tax subsidies) for working-age individuals who save for retirement in particular types of tax-sheltered accounts (e.g., IRAs, 401(k) plans) or who participate in private-sector pension plans (U.S. Congress, 1999). Governments also insure and regulate private pension plans to ensure that private-sector employers can meet current and future pension obligations. Because the institution of retirement depends on having sufficient income to sustain consumption in old age, policies that determine the generosity and stability of both public and private pensions are critical components to late-life well-being for all but the wealthiest older individuals.

As people grow older, the onset of age-related and chronic conditions increases their need for routine access to affordable medical care, making national health insurance an important factor in health security. In most developed countries, health insurance is universal. In the United States, however, eligibility for public health insurance is based on age. Medicare was designed to provide insurance coverage for medical care delivered to individuals 65 and older (Moon, 2006). Very frail older individuals may also require long-term care to sustain their well-being at the highest possible levels. Consequently, most countries have publicly funded long-term care policies, although such programs are usually more fragmented and less

comprehensive than public health insurance and pension programs. In the United States, only poor individuals are entitled to publicly funded long-term care. Medicaid, a means-tested insurance program, expends nearly half of its public funding to pay for long-term care for poor elders. Because care is so expensive—more than $75,000 annually in 2008—even many middle income individuals who pay their own way when they enter a nursing home consume a lifetime of savings fairly quickly to pay for their care. Individuals admitted to nursing homes who must sell their homes and use up their entire savings are described as "spending down" to poverty; impoverishment must occur before they qualify for means-tested assistance for nursing home care under Medicaid.

Each country's welfare state represents its unique combination of policies designed to improve its citizens' social welfare; policies that address late-life well-being are no different in that regard. Among the many differences within countries and across nation-specific policies are: (a) the basis for claiming the benefit (age or need); (b) the basis of eligibility (through contributions or payroll taxes as a worker, through general taxation as a citizen, or as the dependent spouse, partner, or child of a beneficiary); (c) whether the program is *universal* and delivers valuable benefits for all income groups (e.g., Social Security, Medicare) or *selective*, targeted to provide benefits only for individuals with low income (e.g., Medicaid, SSI); and (d) the scope and generosity of benefits delivered. The public/private mix of benefits—that is, the proportion of benefits paid through public programs or through private-sector arrangements—are other policy choices that shape the character of welfare states and, by extension, late-life well-being (Béland & Gran, in press).

Rules governing the three main types of welfare state programs—social insurance, social assistance, and fiscal welfare—determine who pays for benefits and who gets benefits, and the generosity of benefits individuals receive. Age is often used with other criteria to establish eligibility for public benefits. Social Security, for example, at its inception required beneficiaries to be at least 65 years old to be automatically eligible for benefits that were linked to prior earnings and length of work history. To ensure that older workers did indeed retire, however, a strict earnings test for anyone under the age of 70 meant that if beneficiaries earned more than the allowable amount ($9,600 maximum for individuals taking early benefits from age 62–64, and $15,500 for individuals from ages 65–69 in 1999), Social Security benefits

| | Benefit type | Funding Source | Beneficiaries |
|---|---|---|---|
| **Social Assistance** | | | |
| Medicaid | Means-tested health insurance | General revenue, state taxes | Aged, blind, and disabled poor |
| Supplemental Security Income (SSI) | Means-tested cash income | General revenue | Aged, blind, and disabled poor |
| **Social Insurance** | | | |
| Medicare | Universal health insurance for the elderly | Payroll taxes | Social Security recipients and spouses aged 65 and older |
| Social Security | Universal cash pensions | Payroll taxes | Income for workers 62 and older and their dependents |
| **Fiscal Welfare** | | | |
| Tax expenditures for occupational pensions | Tax break for employees | General revenue | Workers in firms offering pensions |
| Tax expenditures for retirement savings | Tax break for income-earners | General revenue | Individuals who contribute to retirement savings accounts |
| Tax expenditures for mortgage interest | Tax break for homeowners | General revenue | Individuals who purchase homes |

SOURCE: Adapted from Quadagno (2008).

***Table 1.*** *Selected welfare state policies that impact late-life well being.* CENGAGE LEARNING, GALE.

would be forfeited. In 2000 the retirement test was eliminated for workers between the ages of 65 and 69, but remains in effect for individuals younger than normal retirement age (66 for individuals born from 1943 to 1954 and rising to 67 for individuals born in 1960 or later) with earnings from employment, and age remains a commonly used standard for Social Security entitlement and for other public benefits such as Medicare. For some means-tested benefits such as long-term care under Medicaid and income under SSI, a combination of age and means testing (targeting only low-income and low-asset individuals) determine eligibility.

## THE OLD-AGE WELFARE STATE

Social assistance policies such as SSI and Medicaid are critically important for the older poor individuals who receive them. For the vast majority of older individuals, however, late-life well-being depends on social insurance benefits such as Social Security and Medicare and the private income streams related to fiscal welfare that subsidize private-sector pensions and retirement savings (Quadagno, 2008). Policies (or their absence) are most fundamentally about who shoulders responsibility for late-life well-being: the state, the family, or the individual? (Uhlenberg, 1992). Throughout human history, most older individuals worked their entire lifetimes or depended on families for support in old age. Policies designed explicitly to enhance older adults' well-being are relatively recent, following the new risks and needs for older individuals that accompanied the shift from rural agriculture and household production to industrialized employment and urbanization. Mutual aid societies and some benevolent employers assisted displaced older workers when paid employment became impossible, from around the last two decades of the 19th century and for the first several decades of the 20th, but such piecemeal assistance could not keep pace with the need given the increased longevity and work/retirement patterns that developed in the 20th century (Uhlenberg, 1992). Wealthy industrialized countries made commitments to meet that need by creating public pensions systems, launching "the old-age welfare state" (Myles, 1989).

While the "old-age" welfare state refers mainly to national pension systems, maturing welfare states developed a range of public policies that contributed to late-life well-being as governments assumed collective responsibility for enhancing social welfare. Although national public pension programs were implemented at different times, ranging from the 1890s for Germany and New Zealand, to the 1930s for the "laggard" United States, by the early 1970s all developed countries had mature public pension systems and comprehensive welfare states, albeit with varying eligibility rules and generosity of benefits (Quadagno & Street, 2005). Welfare states' policies protected individuals and their families from the risks of lost income due to unemployment, disability, divorce, poor health, retirement, and the death of a parent or spouse. Such policies provide income and social services; they also structure social relations. Rules and policies determine eligibility for benefits, shaping the levels and forms of redistribution across social classes and within and across generations (Esping-Andersen, 1990). Welfare state policies that improve the social welfare and skill sets of younger individuals and their families set the stage for future well-being in old age (Street, 2007), even when they are not explicitly designed to do so.

## DEVELOPMENT OF THE OLD-AGE WELFARE STATE IN THE UNITED STATES

In the midst of the Great Depression, when more than half of older Americans were impoverished, President Franklin Roosevelt's New Deal ushered in the U.S. welfare state. Its cornerstone was the Social Security Act of 1935, the first national welfare program. It created two programs explicitly designed to address the income needs of older individuals: Social Security and Old Age Assistance. Old Age Assistance provided income for the aged poor, while Social Security, a contributory social insurance program, provided pensions for retired workers age 65 and older. From its outset, Social Security has been adapted to address changing risks and needs and was soon expanded to include benefits for widows and spouses of retired workers in 1937. By the 1950s Disability Insurance benefits were added, and in the 1970s changes to Social Security permitted retirement with reduced benefits at age 62.

Another major U.S. welfare state expansion during President Lyndon B. Johnson's War on Poverty directly affected older individuals when Medicare and Medicaid were created in 1965. Medicare, the federal health insurance program for older Americans, originally provided health insurance for physician visits and hospital stays. Lack of coverage for prescription drugs, and the costs of deductibles and co-pays, left potentially large out-of-pocket expenses for beneficiaries. Medicaid, a joint federal/state insurance program for the poor, uses age and need as criteria for entitlement. Its coverage of nursing home care is particularly important for older beneficiaries and has turned the program into the dominant payer of long-term care in the United States (Kaiser Family Foundation [KFF], 2007b). A more recent health-related policy expansion that affected late-life well-being was the 2003 passage of Medicare "Part D," which extended prescription drug coverage to older Americans (KFF, 2007a).

Medicare has always had deductibles, co-pays, and, more importantly, gaps in essential coverage that have had to be paid out of pocket, and Social Security was never

intended as the sole source for retirement income. Retirement income security usually depends on additional income from private-sector pensions and/or individual retirement savings. Health security often requires benefits from other sources (either Medicaid or commercial Medigap insurance) to fill gaps in Medicare coverage for expensive health care. Tax expenditures play an important role in encouraging private, individual provision to enhance health and income security. For example, mortgage-interest tax subsidies help individuals become homeowners. The largest single asset for most individuals, a home, provides a source of wealth that can be used to augment retirement income, either by selling it or by taking out a reverse mortgage. For older individuals who are "house rich" and income poor, reverse mortgages provide the option of taking the equity value out of homes in the form of lump sum or monthly payments that depend on borrowing based on the value of the home and the age of the homeowner, while permitting the individual to remain in their home for their lifetimes. Other national fiscal welfare policies that influence security in later life include tax breaks for such private employment benefits as group health insurance and for income placed into private-sector pensions/retirement savings plans.

## CURRENT POLICY CONCERNS

Early public policies served as the foundations for the modern welfare states that addressed life course needs and risks of 20th century industrial economies. Current trends in demographic, political, economic, and social circumstances around the world are the basis for new debates on policies to meet 21st century needs for late-life well-being. Population aging, projections of program costs, and the size of public direct expenditure programs such as Social Security and Medicare have contributed to a sense of urgency about policy reform. High proportions of women in the paid labor market, changing family forms, patterns in men's employment that depart from traditional trajectories (less lifetime employment, shorter job tenures, low or stagnant wages), the impending retirement of the large baby boom cohort, and concerns about the housing and equity markets are all factors that contribute to uncertainty in the capacity of policy to meet new and evolving needs of the U.S. population. These concerns are further fueled by critics of public provision who prefer more private, market-based approaches. Recent trends in a political era dominated by neoliberals who advocate limited government and market solutions for social welfare have leaned toward reforming policies to move away from collective provision and toward more individual responsibility for late-life well-being (Ginn, Street, & Arber, 2001; Hacker, 2006; O'Rand, 2003).

While individual responsibility may be appealing on the surface, a deeper look reveals that many older adults, particularly women who are widowed or single and racial/ethnic minorities, have incomes below the poverty line. Such low incomes are often a function of disadvantages experienced over the life course, including structural race and gender disadvantages associated with lifelong employment opportunities (such as employment sector, wage level, and tenure) (Shuey & O'Rand, 2006). While Social Security addresses some of the problems associated with low lifetime incomes and periods out of paid work, gaps in publicly subsidized private pension coverage create categories of disadvantaged pensioners. Many public pension systems, developed when it was taken for granted that most women would receive pensions as dependents of employed breadwinning men, still fail to adequately address either women's increased employment or their disproportionate responsibility for unpaid care work (Harrington Meyer & Herd, 2007). Because it is normative for women to take time out of paid work to care for children and frail elders, they typically have lower lifetime earnings than men, and are disadvantaged in terms of later life income unless public policies take their socially necessary but unpaid care work into account. Realistically, adapting and reforming public pensions systems to compensate for the realities of women's typical life experiences will probably be necessary, because it would be unrealistic for private employers to take on that responsibility (Ginn, Street, & Arber, 2001).

Moreover, employers since the early 1990s have moved to replace traditional defined-benefit private pensions (which feature pooled risk-sharing and guaranteed benefits) with defined-contribution plans (which feature individual risk and uncertain benefits). Both potential sources of retirement income receive tax subsidies, yet a majority of workers lack private pension coverage altogether (Herd & Kingson, 2005). Although defined-contribution plans offer portability and ownership for a mobile workforce, they come with high risks. This is a particular concern when equity markets and housing markets are unsettled because it exposes individuals to potentially low retirement income in the wake of poor investment choices, inadequate levels of participation and savings (whether due to choice or a lack of surplus funds available for saving), or simple bad luck in equities markets, even if investment decisions are sound.

Advocates of preserving public programs such as Social Security and Medicare observe that they are an essential floor of protection to minimize poverty, preserve the quality and security of older individuals' lives, have low costs of program administration, share risks (by pooling all workers' contributions to provide somewhat higher rates of return for workers with lower lifetime incomes, and by insuring benefits for survivors and

dependents, or for individuals who become disabled), and can adapt to meet future needs (Harrington Meyer, 2005; Herd & Kingson, 2005). Critics of large public expenditure programs raise the specter of impending bankruptcy in the face of population aging and highlight the potential for greater returns (and possibly higher retirement income) if individuals could channel their current Social Security payroll taxes to private investment instead.

While there are benefits and risks with both positions, one thing that is indisputable is that in the long run some adjustments will need to be made to the programs. Advocates of privatization, however, have been unable to dismantle public social insurance programs (Quadagno & Street, 2006). Proposals to reform social insurance programs such as Social Security to cope with population aging range from the incremental to the radical. Some reformers favor small adjustments to payroll tax rates, slowed benefit increases, or gradually raising the age of eligibility for benefits. Others prefer substantial privatization restricting public responsibility for late-life well-being to means-tested health and pension programs for low income individuals. While Medicare and Social Security will likely survive into the foreseeable future, health and income security in later life will undoubtedly depend on policy adjustments that meet 21st century realities.

## OTHER POLICIES AFFECTING LATE-LIFE WELL-BEING

Health and income security are profoundly influenced by the ways other modern welfare state policies interact with earlier life course experiences, shaping an individual's potential educational attainment, occupational status, employment history, and family status. Consequently, social welfare policies that address *needs* and *risks* for younger individuals are critically important to establish a foundation that can sustain well-being later in life, independent of the contributions of age-based programs such as Social Security and Medicare. Social policies that meet earlier *needs* such as high-quality education to prepare for employment opportunities that create surplus funds available for savings, or to create safe and affordable housing and communities, shape earlier life course experiences in ways that create opportunities for individuals to live the kinds of lives that increase their chances for a comfortable old age. So do social policies designed to mitigate some of the *risks* of working-age adults and their families. Unemployment insurance helps downsized workers (laid off from jobs in globalizing economies where unemployment risks are growing) to bridge the income gap until they find their next jobs, disability insurance sustains individuals who become unable to work, and health insurance provides immediate access to medical care for effective interventions when a person becomes sick or injured (Street, 2007). Earlier life course interventions have indirect effects on later life well-being, amplifying the effects of such policies as public pensions and health insurance.

Large government expenditure programs that are national in scope are obviously implicated in the quality of later life. Less obvious but important contributions are made by myriad policies implemented on a more modest scale. A few examples include:

- Local policies relating to the funding and comprehensiveness of public transportation, important when elders no longer drive;
- Policies influencing workplace issues, such as age discrimination, because many individuals reaching retirement age in uncertain economic times want the option to continue working; and
- Issues of home ownership affordability for seniors on fixed incomes, with concerns driven by escalating local property taxes.

## LATE-LIFE WELL-BEING IN THE FUTURE

Researchers recognize that the connections between the quality of later life and policies designed to enhance that quality are intertwined across levels of government and in a state of flux. Tensions between individual responsibility and collective provision are evident in most national debates about the interactions of age, need, and policy. Women's changing roles, population aging, burgeoning national debt, slowed growth of the domestic economy, uncertainty in equity and housing markets, and international insecurity create a very complex policymaking environment. Given unprecedented population aging, policy debate has too often centered myopically only on public policies that can be tweaked, stretched, or transformed to provide for soon-to-be-retiring baby boomers. Beyond public resistance to tax increases to fund public policies, complicated taxing and spending arrangements focus most policy attention on direct public expenditure programs, while obscuring the expense and inefficiencies created by using tax expenditures. Uncertain national economic conditions and the sheer size and complexity of policies that enhance the well-being of older adults create challenges for transforming and updating policies.

Despite ongoing debates about their merits, flaws, and affordability in the future, universal programs such as Social Security and Medicare are effective enough to create widespread, intergenerational, public support (Hudson, 2005; Street & Cossman, 2006; Williamson,

McNamara, & Howling, 2003). There is no doubt that public health and pension programs are expensive, but their payoff has been substantial. The public policies of modern welfare states have contributed to increased longevity, more stable retirement income, better access to health care and improved quality of life for older individuals throughout the developed world—precisely the payoffs to expect from large public investments in social welfare. While policies critical to late-life well-being will undoubtedly undergo policy changes in the future (as they have in the past), it seems unlikely they will be dismantled in the face of the obvious need for income and health security in old age. If retirement is to remain an institutionalized stage of the life course, policies that provide pension income and health insurance will remain essential.

**SEE ALSO** Volume 2: *Policy Health;* Volume 3: *Pensions; Poverty, Later Life; Health Care Use, Later Life; Long Term Care; Social Security.*

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# POLITICAL BEHAVIOR AND ORIENTATIONS, LATER LIFE

Students of politics have long recognized that the effectiveness and stability of democratic systems of government rest upon the broad-based political activity of their citizens. Such activity is not only necessary for the election of officeholders who will serve as representatives of the people, but is also necessary to maintain a common sense of legitimacy among those over whom the government exercises authority. The study of political behavior and orientations is the study of democratic activity on the part of individual citizens, and the beliefs they hold that help to shape their activity. The political behavior of an individual consists of his or her efforts to participate in the electoral system, influence officeholders and policy makers, organize and join with those who share their political interests, protest or support government policy,

express political opinions, persuade fellow citizens to believe or behave in a certain way, or take other actions relative to politics or the political system.

Political behavior is motivated and guided by the individual's political orientations, a set of attitudes and beliefs regarding political ideology, policy preferences, partisanship, and identifications with other politically relevant ideas, symbols, and groups. Political behavior and orientations in individuals have most frequently been studied through the use of large-scale surveys that ask respondents to report their level of participation in political activities and their opinions about political subject matter.

## AGING AND POLITICS

In the more than 6 decades that such surveys have been conducted, it has become evident that people of different ages participate in the political system at different rates. For example, research has consistently shown that the most basic and often studied measure of mass political behavior, the rate at which citizens exercise their right to vote, appears to arc upward throughout most of the life course. Propensity to vote starts out relatively low as young people enter the electorate, increases rapidly in young adulthood, continues to increase at a decelerating pace throughout middle age, peaks and levels off at around the age of retirement, and then slowly begins to decline only as individuals enter advanced old age (Rosenstone & Hansen, 1993). U.S. Census data on voter turnout in national elections from 1998 to 2004 show the same relationship between age and voter turnout, with the highest rates of participation consistently occurring in the 65 to 74 age group (U.S. Census Bureau, 2008).

The relationship between aging and political orientations is much less clear. As one might expect, orientations that have a motivating or enabling influence on an individual's propensity to participate, such as interest in political affairs, knowledge about politics, and strength of partisan (one political party) affiliation, do seem to increase in intensity with age (Delli Carpini & Keeter, 1996). However, the concept of political orientations also includes the ideological and partisan direction of beliefs and affiliations, and those do not seem to vary systematically by age. Despite conventional wisdom to the contrary, people do not become significantly less liberal and more conservative in their ideology as they age (Alwin & Krosnick, 1991).

As John Campbell and John Strate (1981) report, "The political orientations of older people are not peculiar. Knowing that someone is old will not help very much in predicting how conservative he or she is, in most important respects" (pp. 590–591). Identification with one or another political party, in particular, seems to be a remarkably stable trait; the partisan attachments formed early in one's political life tend to persist well into adulthood (Jennings & Markus, 1984). There is little evidence, and little reason to expect, that the ideology, partisanship, or policy attitudes of a diverse cohort of people would converge as they age together.

Although most research suggests that growing older is associated with increasing levels of many types of political activity over most of the life course, the question of how and why—and even if—this is the case is a matter of some dispute. A few studies, most notably that by Warren Miller and J. Merril Shanks (1996), challenge the notion that aging affects political behavior at all during the middle years of life. They propose, instead, a lengthy plateau in the rising life course arc of voting turnout; aside from dramatic positive growth in voting in the first few elections in which a young adult is eligible and a significant decline in turnout in advanced old age, they posit that the shape of the age-voting relationship is essentially flat across most of the life course. Questions and controversies such as these remain because of competing theories about the mechanics of political socialization and the nature of the survey data upon which the aging and politics research is based.

## THEORETICAL FOUNDATIONS

Scholars have proposed four different theoretical models of the effects of age on political behavior and orientations (Sears, 1983). The *life cycle model* posits periodic changes in political orientations and behavior because of transitions through different age-related social roles and statuses, as well as gradual changes characterized by political maturation, socialization, and habituation. As individuals age, they are shaped by their education, their social interactions and experiences, and their use of the news media to learn about politics and keep abreast of political issues, events, and personalities. The process of aging may result in a growing ability to understand abstract political concepts, an accumulation of experience and knowledge about politics that makes participation easier and more meaningful for the individual, and the development and reinforcement of habits of political activity.

Transitions through the stages of the life course help to structure the social roles that individuals play and thus the stake they hold in society and the resources they bring to the political system. The changing structure of incentives, opportunities, and resources that accompanies changing status helps to mold political beliefs and actions as citizens age. With the onset of advanced old age, biological changes can lead to gradual declines in hearing, eyesight, balance, mobility, and cognitive functioning, making it more difficult to follow politics in the news media and interfere with the ability to participate in

political activity. While the life cycle model does not seem to apply to the partisan and ideological patterns of orientations in the population, it is arguably the best description of the relationship between aging and political behavior, which would explain why most political scientists who have considered the issue have found gradually increasing levels of political activity through the entire adult life span.

Life cycle model opponents rely implicitly on another model, the *impressionable years model*, to provide the foundation for their counterargument. The impressionable years model emphasizes the importance of an individual's formative political experience in late adolescence and early adulthood; it hypothesizes that orientations toward politics and the propensity for political activity are characteristics that are developed relatively early in adult life and resist change in later stages of the life course. An individual undergoes formal and informal political socialization in early adulthood, generally considered to be between the ages of 17 and 25 (Schuman & Scott, 1989), leading to a great deal of change in political behavior and orientations during that portion of the life course. Once the individual reaches political maturity, however, the effects of those socialization experiences crystallize and set the stage for later behavior and orientations toward politics. According to the impressionable years model, the differences in socialization experiences between birth cohorts are what result in differences in political generations, and those generational or cohort differences must be responsible for the appearance of aging effects in cross-sectional studies.

The two remaining models leave much less room for any relationship between age and politics. The *lifelong openness model* asserts that changes in attitudes and behavior are equally likely at any point in the life course, and that such changes bear no relation to the age of the individual but rather arise irregularly over the course of one's life from periodic exposure to historical events or the idiosyncratic interaction with one's political and social environment. The *persistence model* implies a much different effect; political orientations are developed and crystallized not during early adulthood but, rather, during childhood and are set in place by the time an individual reaches adulthood. In that case, survey data collected on those age 18 and older would show no relationship between advancement through the life course and change in political behavior and orientations, even in early adulthood.

## METHODOLOGICAL CHALLENGES

To further complicate the theoretical tension between the life cycle and impressionable years models, the study of aging and politics is impeded in practice by the statistical confounding of aging, period, and cohort effects in survey data. Period effects occur when the historical ebbs and flows of political events shift the overall behavior and orientations of entire citizenries. Cohort effects, as represented by the impressionable years model, occur when these events are experienced by young people in their politically formative years and create patterns of behavior and orientations among the members of that particular generation that remain throughout their lives. Age, period, and cohort are statistically confounded because, for example, in survey data collected during a single period, the effects of age and cohort perfectly mask one another. An individual's chronological age at a given point in time is both a marker for his or her position in the life course as well as his or her membership in a particular generation (Glenn, 1976). What appears to be a statistical relationship between age and behavior in a snapshot survey might actually be, as impressionable years model proponents have argued, attributable to the different formative experiences of successive generations rather than to the process of growing older and traversing the life course. Perhaps it is not that older people vote more, it is that the more recent generations have been socialized to vote less. Likewise, it may not be that people become more conservative as they age, but that earlier generations entered adulthood having been socialized in a more conservative era.

The utility of chronological age as a marker of position in the life course is threatened not only by cohort effects, but by the nature of the marker itself. The age number is merely a rough surrogate for the myriad psychological, social, and biological processes that individuals experience as they grow older. The measure of a person's age in years is a rough indicator of these processes because aging not only occurs gradually as individuals develop and mature and accumulate experience, but it has a periodic nature as well, in which gradual development is punctuated by important life course transitions. Plus, the rate at which different individuals develop varies considerably, as does the timing of those critical milestones along the life course (e.g., graduation, marriage, homeownership, parenthood, promotion, empty nesting, retirement, widowhood, and advanced old age). Nevertheless, short of being able to account for individual differences in development and life course transition timing, chronological age is usually the best measure available.

## LIFE SPAN CIVIC DEVELOPMENT

The most compelling research to attempt to address the theoretical and methodological challenges described above was conducted by Strate and his colleagues (1989) and strongly supports the life cycle model of aging with regards to political participation. They used

## AMERICAN ASSOCIATION OF RETIRED PERSONS (AARP)

AARP (formerly The American Association of Retired Persons) was founded in 1958 but traces its roots to the National Retired Teachers Association (NRTA), founded by Ethel Percy Andrus (1884–1967) in 1947 to provide life insurance to its members. As of 2008 AARP is the largest voluntary organization in the United States with nearly 40 million members aged 50 and over. It is commonly considered an aging interest group, but it is also a member benefit group as was its NRTA predecessor, providing discounts on goods and services and marketing products such as automobile and health insurance to its members. AARP does engage in political advocacy on behalf of its members, but its size and the diversity of its membership makes it difficult for the organization to take stands on contentious issues. Since its disastrous involvement in the 1988 debate over the Medicare Catastrophic Coverage Act, in which it assumed a pro-Act position that was later repudiated by many of its own members, it has tended to act cautiously and avoid taking strong controversial positions that might alienate some of its members.

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a large cross-sectional time series of survey data from the 1952 through 1984 American National Election Studies in an attempt to disentangle the effects of age, historical period, and cohort on voting. They found that, even after controlling for period and cohort effects across 32 years worth of data, age has strong direct and indirect positive curvilinear effects on behavior. The indirect effects of age consist of age-related increases in other factors that positively influence political behavior, such as income, strength of partisanship, church attendance, attachment to one's community, a sense of government responsiveness, and civic competence, which they define as "knowledge and habits of knowledge acquisition relevant to politics" (Strate et al. 1989, p. 450).

In other words, older people tend to vote at higher levels in the later stages of life not because of when they matured politically, but because the process of aging results in a growing availability of resources to expend in political activity, an expanding stake in the political order, deepening attachments to social and political issues and groups, an enhanced sense of the efficacy of one's political actions, a heightened interest in politics, greater diligence in monitoring politics in the print media, and an increasing knowledge and understanding of politics, all of which motivate and enable higher levels of political activity. Strate and his colleagues found that the effects of aging on voting, when properly accounted for, match, and perhaps even exceed the universally accepted strong effects of education on voting. In some ways aging is a substitute for formal education; while college-educated young adults participate at much greater rates than their less-educated counterparts, there are decreasing differences in rates of participation between those who were and were not college-educated across the middle of the life course, and the difference disappears entirely in the late stages of life.

### HOW POLICIES MAKE CITIZENS

Subsequent research has helped to further illuminate the life cycle model by considering the ways in which age structures individual interactions with political institutions. For example, Steven Rosenstone and John Hansen (1993) found that as individuals grow older, they become increasingly likely to be contacted by a political party during election campaigns. This type of mobilization is an important source of motivation to participate that arises from the political context rather than the individual, yet it is positively influenced by the individual's age. Of course, parties employ optimization strategies to guide their efforts in turning out the vote, and they recognize that contacts with older citizens are more likely to be effective toward that end.

Andrea Campbell (2002) found that senior citizen political involvement in the United States is strongly augmented by their status as recipients of Social Security benefits. Social Security not only provides resources to older individuals that can be expended in the pursuit of political activity, but it signifies the strong stake in government policy that they hold, which motivates them to act in politically relevant ways to protect that stake. The pull of Social Security in the later stages of life is so strong that it helps to overcome disadvantages faced by those with lower incomes. Similar to the effects of education, those with higher incomes generally participate at levels higher than do those with lower incomes. This disparity is dramatically reduced among Social Security beneficiaries; because they rely to a greater extent on those benefits, lower-income seniors are more urgently mobilized to participate at higher rates then their socioeconomic status would suggest. Not surprisingly,

Campbell also found an uncommon indicator that the position in the life course of those in later life, and thus their status as beneficiaries, has a directional effect on their orientation toward Social Security policy. Older Americans almost unanimously support the maintenance of Social Security benefits, as one would expect.

## THE ELECTORAL BLUFF

What effect does political activity by older adults have on democracy? Obviously, heightened participation by those in later life helps lend legitimacy and stability to democratic systems, as all conventional political participation does. But aside from support for age-based program such as Social Security, there is no reason to believe that the increased activity by older adults can be marshaled in a particular ideological or partisan direction. As Robert Binstock (2000) points out, people in later life are "heterogeneous in socioeconomic and political characteristics . . . [and] unlikely to cast their ballots in a monolithic or even cohesive fashion." The exception, he notes, would be if political parties or candidates endorsed "sharply different policies on aging. . . . In such circumstances the votes of older persons might tend to cohere" (p. 30). Barring these unlikely circumstances, the ability of age-based interest groups to swing elections and influence officeholders may be illusory. Even the political power of such a huge organization as the American Association of Retired Persons (AARP) is more likely to be based upon the perceived threat of cohesive activity by its members, a phenomenon Binstock calls "the electoral bluff" (2000, p. 24), than on any actual ability to marshal the orientations and behavior of its members in one direction or another.

Political behavior, then, appears to be quite susceptible to life course effects, as are political orientations that encourage and facilitate participation, but the partisan and ideological directions of those orientations are not, with the exception of support for policies whose benefits accrue based on the age of the recipient. In short, individuals in democratic systems such as the United States become more likely to fit the mold of the ideal citizen—motivated, informed, and active—as they age. They enter retirement with a lifetime's accumulation of resources, habits, and motivations to participate, and also with a renewed resource (more free time) and a fresh incentive (protection of their Social Security benefits). Only very late in the life course, when the physical rigors of old age begin to make their effects felt, when difficulty seeing, hearing, and walking makes participation more difficult, do individuals begin to decrease their levels of activity.

**SEE ALSO** Volume 2: *Policy, Health;* Volume 3: *Policy, Later Life Well-Being; Social Security; Time Use, Later Life; Volunteering, Later Life.*

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***Thomas B. Jankowski***

# POPULATION AGING

An individual's age is determined by the time elapsed since she or he was born. A population has an age, too, and the world's population is getting older. A population's age is determined by the age distribution of its individual members. In aging populations, the older segment of the population (usually those aged 65 or older) represents a relatively large proportion of the total population. The populations of all developed and many developing countries are aging. This unprecedented demographic trend is a consequence of relatively recent declines in mortality and fertility and has profound and long-term consequences for social issues such as health, economic productivity, and health care. This entry will describe young and old populations, explain the demographic processes that cause populations to age, and discuss the demographic and social consequences of population aging.

## WHAT OLD AND YOUNG POPULATIONS LOOK LIKE

A population's age is actually a facet of its age-gender structure. The age-gender structure of a population refers to the age distribution of men and women in the population. This can be represented graphically using a population pyramid (sometimes called an age-gender pyramid). A population pyramid depicts either the number or percentage of people in a population at each age. Examples of population pyramids are shown in Figure 1. The bars on the right-hand side of each pyramid represent the age distribution of women and the bars on the left-hand side represent the age distribution of men.

A young population has a greater proportion of the population concentrated at the younger ages. This gives the population pyramid its wide base and triangular shape. The pyramid on the left in Figure 1 is typical of the population of less developed countries and provides a good example of a young population. In contrast, an old population has a greater proportion of the population concentrated at older ages. The pyramid on the right in Figure 1 represents the population of more developed countries and is a good example of an old population. Population pyramids for old populations tend to look more rectangular than the triangular shape of a young population. One way to describe the aging of a population is to refer to the rectangularity of its population pyramid over time. Regardless of their shape, the graphical depictions shown in Figure 1 are called *pyramids*.

The age distribution of a population can be summarized statistically using the median age. Median age refers to the midpoint of an age distribution where 50% of the population is older and 50% are younger than that value. In an old population, the relatively large numbers of people in the older age groups tends to increase the median age. In a young population, the concentration of people in younger age groups produces a lower median age. The median age of the world population is 28 (United Nations, 2007). The country with the highest median age is Japan (43 years), whereas the country with the lowest median age is Uganda (15 years). The United States has a median age of 36.

A third way to characterize the age of a population is to examine the proportion of the population in the older age groups. In the more developed countries, age 65 is usually considered the threshold for advanced age because this is the age at which adults generally become eligible for full Social Security benefits. In less developed countries, age 60, or sometimes an even younger age, is used as the beginning of old age. Because of recent growth in the older population, especially in more developed countries, the older population is commonly stratified into three age groups. Persons aged 65 to 74 are generally fairly independent and healthy. Consequently, they are commonly referred to as the *young old*. Persons aged 85 and older—the *oldest old* group—tend to experience numerous health problems resulting in considerable frailty and dependence. The 10-year age group between 75 and 84 constitutes an intermediate group between the young old and the oldest old. A population with a relatively large proportion of its members in the oldest segments of the population may be classified as an old population. Conversely, young populations have a relatively small proportion of their members in these old-aged categories. The country with the highest proportion of its population aged 60 and over is Japan (27.9%), whereas the United Arab Emirates has the lowest percentage of its population aged 60 and over (1.7%) (United Nations, 2007). With respect to the size of the proportion of persons 60 and over, the United States is ranked 43rd among the nations of the world with 17.2% of the population aged 60 and over.

## HOW POPULATIONS AGE

An aging population is one in which the older population grows at a faster rate than the total population. Consequently, the proportion of the population at older ages increases over time, prompting a secular increase in the median age. Population aging in more developed

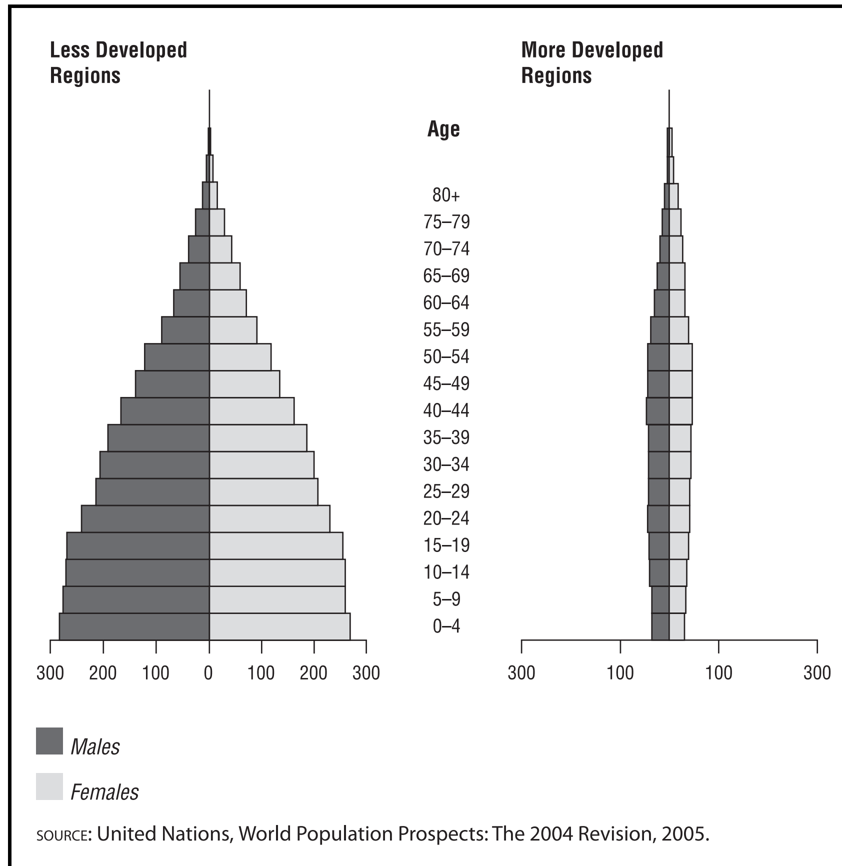


***Figure 1.*** *Age Distribution of the World's Population. Population structures by age and sex in the millions, 2005.* CENGAGE LEARNING, GALE.

countries occurred as a result of the historical shift from high fertility and mortality to low fertility and mortality. This demographic transition occurred in three stages (Gill, Glazer, & Thernstrom, 1992). The first stage is characterized by high mortality and fertility and prevailed for most of human history. During the second stage, both fertility and mortality declined. Declines in mortality generally preceded declines in fertility generating dramatic population growth. During the third stage, both mortality and fertility reached low, stable levels.

The transition from high fertility and mortality to low fertility and mortality produces a systematic shift in the age-gender structure resulting in population aging. In populations with high fertility rates, each successive birth cohort tends to be larger than the one preceding it, creating a high proportion of young people in a population. As fertility declines, subsequent birth cohorts are similar in size, reducing the proportion of the population concentrated at young ages. When mortality is high, birth cohorts suffer considerable attrition with few cohort members surviving until old age. Consequently, older adults constitute a relatively small proportion of the population, making the median age of the population relatively young. Initial declines in mortality generally occurred at the youngest ages resulting in improved survival for infants and young children and ironically producing a younger population. However, subsequent declines in mortality benefit middle-aged and older adults, resulting in disproportionately high growth rates for these age groups and an increase in the median age. The dramatic increases in life expectancy that occurred during the 20th century in developed countries, and in most less developed countries, mean that people routinely survive to older ages, increasing the numbers of older adults in a given population.

The population of the United States provides a good illustration of an aging population. During the 100-year period between 1900 and 2000, the United States, along with other industrialized countries, made the transition from a young population to an old population. The median age of the U.S. population rose from 22.9 years in 1900 to 35.3 years in 2000. Over that 100-year period, the number of adults aged 65 and older grew from 3.1 million to 35.0 million. In any growing

population, the number of older adults (and indeed any age group) will increase. A truer indicator of population aging is the growth of the older population relative to that of the total population. Between 1900 and 1950, the population of the United States approximately doubled (76 million to 151 million), while the older population quadrupled (3 million to 12 million). Between 1950 and 2000, the total U.S. population grew from 151 million to 281 million, while the older population grew from 12 million to 35 million. Consequently, the proportion of the population aged 65 and older increased from 4.1% in 1900 to 12.4% in 2000. The relative size of the oldest age group (those 85 and older) increased even more dramatically, from only 0.2% of the population in 1900 to 1.5% of the population in 2000 (roughly a sevenfold increase!).

While the demographic transition during the 20th century provides a good description of historical demographic changes in more developed countries, the extent to which this model applies to less developed countries has been the source of considerable debate (Weeks, 2005). In the majority of less developed countries, both mortality and fertility have declined, but have not reached the low sustained levels observed in more developed countries. There are two consequences of this pattern in less developed countries. First, the populations of many less developed societies have begun to age, especially countries in South America and Asia. (Many countries in Africa sustain high fertility rates resulting in very young populations.) The second consequence of the intermediate levels of mortality and fertility decline in less developed countries is that population growth in these societies remains rapid.

Although population aging at the national level is driven primarily by fertility and mortality patterns, migration can exert a significant influence on local populations. One migration pattern that can result in local population aging is the in-migration of older adults. Florida maintains the highest proportion of older adults of any state in the United States (17.6% aged 65 and over) due to a large and sustained influx of older migrants. Local populations also can age as a result of the out-migration of younger people. For example, the populations of some Midwestern states, such as North and South Dakota, have aged considerably since the 1980s as younger people have moved to other states seeking economic opportunities.

## SEX RATIO

Upon examining the population pyramids shown in Figure 1, one might notice that they are not symmetrical, especially at the top (the older ages). This lack of symmetry occurs because there are rarely the same number of men and women in a population. The sex ratio, defined as the number of males per 100 females, is a helpful way to describe the gender composition of a population. This statistic can be calculated by dividing the number of men by the number of women and multiplying this total by 100.The current sex ratio for the total U.S. population is 97.2 indicating that women outnumber men. The sex ratio varies considerably by age. Because male births outnumber female births, the sex ratio at young ages tends to favor males. For example, the sex ratio for those under 5 years of age is 104.8. Because women experience lower age-specific mortality, the sex ratio decreases for older age groups and favors women. The sex ratio for young adults (20 to 39) is 103.9 but drops to 97.0 for those in middle age (40 to 59). Older adults (65 and older) have a sex ratio of 72.9; whereas among the oldest segment of the population (85 and older), the sex ratio drops below 50 at 47.6.

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## CONSEQUENCES OF POPULATION AGING

Population aging has two important demographic consequences. First, population aging has a profound influence on the gender composition of populations. Women have lower rates of mortality in almost all current societies (Waldron, 2005). In more developed countries (those with the oldest populations), the gender differences in mortality are particularly pronounced. For example, women in the United States have an average life expectancy at birth of 80.4 years compared to 75.2 years for men (Kung et al., 2008). One important consequence of women's greater longevity is that women outnumber men in most populations. In the United States women outnumber men by 4.3 million (U.S. Census Bureau, 2008); worldwide, there are 70 million more women than men (United Nations, 2007). The sex ratio—the number of men per 100 women—declines dramatically with advancing age. In fact, among those 85 and older, women outnumber men by approximately two to one.

A second demographic consequence of population aging is the effect this shift has on the relative numbers of old and young people in a society. The dependency ratio (sometimes called the support ratio) is a helpful way to summarize the extent of the population most likely to need social support and is defined as the ratio of the combined child population (0 to 14 years) and older population (65 years and over) to the rest of the population (15 to 64 years). The dependency ratio can be decomposed into the youth dependency ratio (the ratio of the 0- to 14-year-old population to the 15- to 64-year-old population) and the old-age dependency ratio (the ratio of the 65 and older population to the 15- to 64-year-old population). In younger populations, the youth dependency ratio is a far larger component of the dependency ratio compared to the old-age dependency ratio. For example, in the population of Africa, older adults comprise less than 10% of potential dependents (United Nations, 2007). In older populations, such as those in European countries and the United States, the youth dependency ratio and the old-age dependency ratio are approximately equal, indicating that older adults account for roughly half of potential dependents (United Nations, 2007). The composition of the dependent population has important implications for the type and extent of both formal and informal (filial) support systems needed in a given society.

## CURRENT AND FUTURE RESEARCH ON POPULATION AGING

Population aging also has profound social consequences that are currently the foci of considerable research activity. Perhaps the most urgent set of questions being investigated by social researchers concerns the impact of a rapidly growing number of older adults on population health and systems of health care. The decline in mortality that has occurred in most parts of the world precipitated a shift in the primary causes of death from acute infectious and parasitic diseases (such as influenza and malaria that can strike any age group) to degenerative and chronic conditions (such as heart disease and cancer, which occur mostly at older ages) (Omran, 1971). Heart disease is now the leading cause of death in more developed nations (Syme, 2000); and in the United States, heart disease and cancer account for approximately half of all deaths (Kung et al., 2008). The shift from acute to chronic disease raises a number of questions about the future of population health and presents a new set of challenges to health care systems in countries with aging populations.

A key question has emerged as a consequence of increasing longevity: How will additional years added to life expectancy affect population health? The risk of chronic illness rises precipitously with age. In the United States the vast majority of older adults report at least one chronic condition and about half report multiple chronic conditions (He et al., 2005). One potential consequence of declining mortality at older ages is an increase in the prevalence of chronic comorbidity triggering an epidemic of impairment and disability in aging populations. A second alternative is that declines in mortality at older ages are accompanied by declining severity of chronic illness and an attenuation of their disabling consequences (Robine & Michel, 2004).

As evidence of the second alternative, Kenneth Manton and his colleagues (1997) reported significant declines in the prevalence of disability throughout the 1980s and early 1990s. These findings have been echoed by other studies that have reported lower rates of disability (Freedman et al., 2002) and better self-assessments of health (Martin et al., 2007). While many members of the older population appear to be benefiting from improvements in the treatment of chronic illness and its sequelae, these positive trends are not enjoyed to the same extent among racial and ethnic minority groups and among poorer segments of the population, creating considerable health disparities in later life (Crimmins & Saito, 2001).

Recent mortality decline has provoked a debate about the possibility of an upper limit to human life expectancy (Olshansky, Carnes, & Cassel, 1990). Assuming that point has not yet been reached and that future increases in longevity are likely, trends in chronic disease and disability in the older population will undoubtedly be scrutinized carefully to determine whether there is an inflection point at which increased longevity leads to a greater prevalence of morbidity. As the populations of less developed countries continue to age, there will be considerable interest in the impact of chronic disease and disability on the health status of older populations in these countries.

A second set of social issues inspired by population aging focuses on the increasing need for social support generated by a growing older population. One of the key services needed by older adults is health care. Because chronic conditions often persist over a substantial period of one's life, chronically ill persons require extensive medical care. According to the Centers for Disease Control and Prevention (2008), treatment of chronic disease accounts for the majority of health care expenditures in the United States. This finding, coupled with sharply rising health care expenditures in recent years, raises concerns about the cost of meeting the health care needs of an aging population. The financial ramifications of population aging have been a point of contention, however, as several studies have found weak or no effects of

population aging on health care expenditures (Getzen, 1992; Werblow, Felder, & Zweifel, 2007). The capacity of the U.S. heath care system to meet the medical needs of the aging baby boom cohort will certainly be at the forefront of social scientists' and health care providers' research agendas in the coming decades.

**SEE ALSO** Volume 3: *Age Structure; Aging; Demographic Transition Theories; Epidemiologic Transition; Global Aging; Life Expectancy.*

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***Chuck W. Peek***

# POVERTY, LATER LIFE

Although public programs such as Social Security have successfully reduced the poverty rate among older adults in the United States, economic hardship is a familiar experience for many older Americans. The risk of experiencing poverty in any given year is relatively low for American adults, though the accumulation of that risk across the life course is considerably higher (Rank & Hirschl, 1999b). As a result, a sizeable proportion of the older adult population has experienced poverty at some point during adulthood, experiences that may affect one's economic security in the long term.

Because so many people live for many years after they have retired, the issue of post-retirement economic support is of great importance for seniors, their families, and society at large. The longer the time spent in retirement, in the absence of receiving a wage, the more likely that economic resources will be depleted at some point. Sufficient personal retirement planning can offset this risk, as can social policies that recognize the importance of ensuring a base level of economic support. Fundamental to the discussion of economic well-being is the determination of what it means to be poor and the determination of an appropriate poverty threshold for persons and their families.

Though controversial both in definition and in measurement, poverty is commonly used as an indicator of economic deprivation (Citro & Michael, 1995). Because the poverty measure based on income is a relatively easy way to gauge economic status and is uniformly applied across the United States, it is the most frequently cited measure of economic well-being. In addition to a discussion of the definition and measurement of poverty, this entry includes an examination of elderly poverty rate trends over time in the United States and of specific subpopulations particularly at risk within the older population.

## DEFINITION AND MEASURE

Poverty measures are based on comparing the level of income considered adequate for the living expenses of an individual or family to the amount of their pretax income; income includes earnings, pensions, and all other forms of cash receipts. Two slightly different poverty measures exist in the United States: the *poverty threshold* and the *poverty guidelines* (Department of Health and Human Services, 2008). The poverty threshold is created by the Census Bureau for statistical purposes and takes into account both family size and the age of the householder. The simpler poverty guideline is used for administrative purposes, such as determining eligibility for government programs.

Both poverty measures assume that certain economies of scale come with larger households and calculate poverty based on the number of persons in each family. The poverty threshold additionally considers whether the householder of a one- or two-person family is an older adult. For householders over age 65, the poverty threshold is 8–10% lower compared to families headed by younger persons, based on the fact that the food plan costs used in the development of the poverty methodology in the 1960s were found to be lower for aged adults (Fisher, 1997). In 2006 the poverty threshold for a senior living alone was $9,669; the equivalent value for a two-person family in which the householder was over age 65 was $12,201 (U.S. Census Bureau, 2007b).

Although using the same consistent measure across time is useful both in trend analysis of poverty and in providing a consistent benchmark for public policy, this measurement has fallen under some heavy criticism. The criticisms that are particularly salient for older adults are based on the calculations used to determine both income as well as cost of living needs (Citro & Michael, 1995). Some critics stress the need to consider in-kind benefits in the calculations; for example, programs such as Medicare or low-income housing may play a significant role in easing a senior's financial burden and could be considered a type of income. Including the value of these types of benefits in the calculation of income would result in a lower poverty rate. Other critics argue that the thresholds used to define poverty status are too low, especially for seniors, many of whom face significant medical costs and are especially vulnerable to fluctuations in other expenses, such as housing costs. Basing the calculation of poverty on costs that disproportionately affect seniors, such as health care costs, might have the result of increasing the estimation of economic hardship for the older population.

## THEORETICAL CONSIDERATION

The life-course perspective is relevant to understanding poverty in later life in part because a good predictor of late-life poverty is whether (and for how long) a person experienced poverty in earlier years (Rank & Hirschl, 2001). Moreover, many of the factors that contribute to poverty (e.g., employment history) are the result of lifelong processes. Indeed, the experience of poverty is not a single static event but rather a dynamic process reflecting a series of evolving factors contributing to late-life poverty.

Across the lifespan, many people experiencing poverty do so for relatively short spells of time and move in and out of poverty. For some, the experience of poverty can be chronic, whereas others manage to exit poverty (Rank & Hirschl, 2001). Though persons ages 65 and older have fewer episodes of poverty compared to younger persons, seniors have a higher chance of being chronically poor compared to younger adults (Iceland, 2003). In other words, if an older person is poor, he or she has a lower chance of exiting poverty than does his or her younger counterpart.

Factors that directly affect poverty in late life are determined across the adult lifespan, such as the accumulation of human and social capital. Human capital refers to the accumulation of acquired workplace skills, which can affect that individual's ability to participate in the economy and increase returns from the labor market (Becker, 1964). Human capital theory can be used to explain the pattern of individual earnings across the life course, whereby earnings are lowest for younger persons and then rise rapidly with age as new capital is acquired (McKernan & Ratcliffe, 2002). The pace of this rise begins to slow toward retirement age as the increase of human capital slows, resulting in a decrease in earnings near retirement ages (McKernan & Ratcliffe, 2002). This pattern is reflected in poverty spells, in which older adults have higher chronic poverty rates and lower exit rates from poverty (Iceland, 2003; McKernan & Ratcliffe, 2002).

In addition to human capital, other sources of wealth can accumulate over the life course and may be drawn on by elders faced with economic hardships. One such source is social capital, which refers to an individual's

access to social resources created through relationships within social networks (Coleman, 1988). Resources that may be especially useful for seniors include information exchange (e.g., information about available public assistance) as well as intergenerational assistance (e.g., in-kind assistance for parents provided by children), among other resources. Social capital may offset shortfalls in other types of capital and buffer some of the effects of economic hardship.

## HISTORICAL AND DEMOGRAPHIC TRENDS

An examination of poverty rates in the United States over time suggests that overall poverty rates have declined since data collection began in 1959 (Iceland, 2003). Figure 1 examines this trend by age groups and shows a decline of poverty rates among older adults from more than one-third (35%) of elders in 1959 to 9.4% in 2006 (U.S. Census Bureau, 2007a). In large part this drastic decline in poverty rates for elders can be attributed to the success of the Social Security and Medicare programs (Rank & Hirschl, 1999a).

Though poverty-trend data suggest that most older adults are not poor, there is evidence that many elders live just above the poverty line, near the edge of poverty. In 2003 an additional 6.7% of elders lived in families with incomes between 100% and 125% of the poverty line (He, Sengupta, Velkoff, & DeBarros, 2005). Often living on fixed incomes, elders considered to be near poor may have no additional resources to offset economic risks such as higher property taxes or increasing health care expenses. This suggests that in addition to the current number of older adults living in poverty, many more elders are economically vulnerable.

Cross-sectional data collected at one point in time fail to capture the dynamic paths in and out of poverty that happen across the life course, and recently researchers have begun to analyze the paths of poverty with longitudinal datasets. For example, Rank and Hirschl (1999b) examined the lifetime risk of poverty and found that by the age of 30, about 27% of persons in the United States will have experienced poverty at some point. They contrasted this to persons over age 65, where more than one-half of older adults will have experienced a spell of poverty. More dramatically, about two-thirds of persons ages 85 and older had experienced poverty in their adult lifetimes.

## POCKETS OF POVERTY

In addition, there are significant differences within older adults as a group where pockets of poverty highlight a disproportionate risk of poverty for certain subgroups,

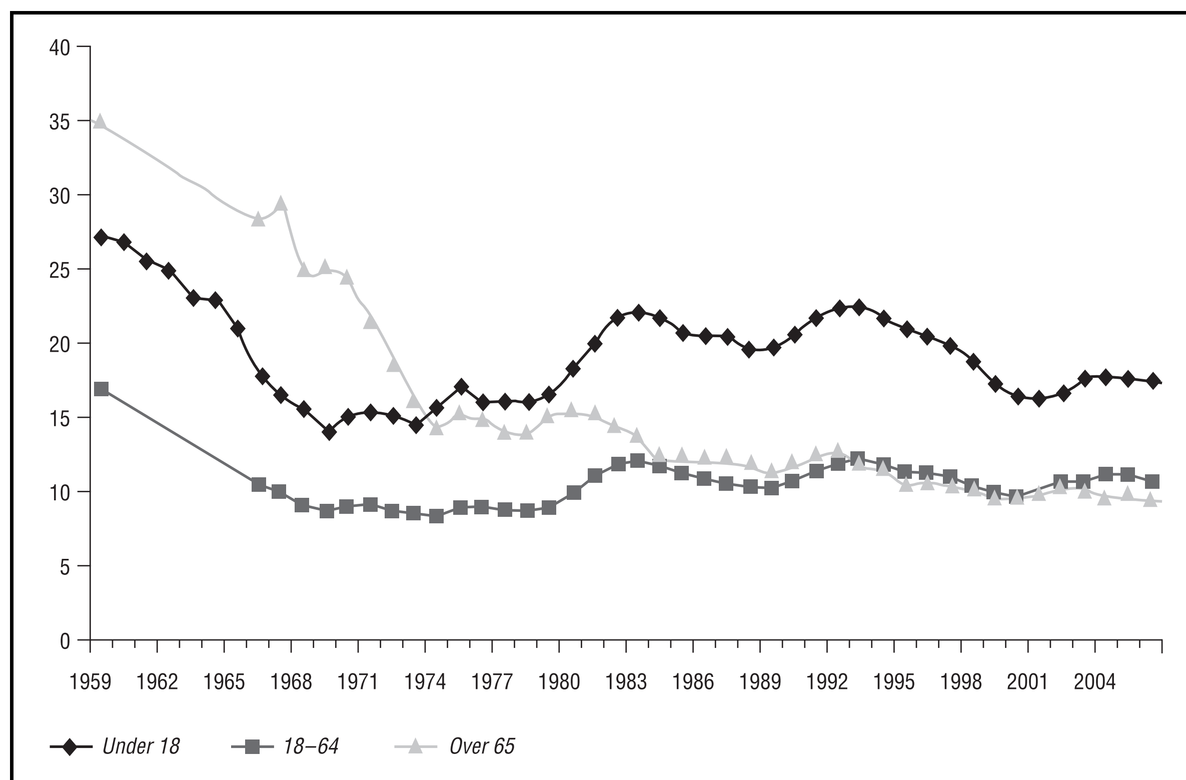


***Figure 1.*** *Trends in poverty rates (in percent) in the United States by age, 1959–2006.* CENGAGE LEARNING, GALE.

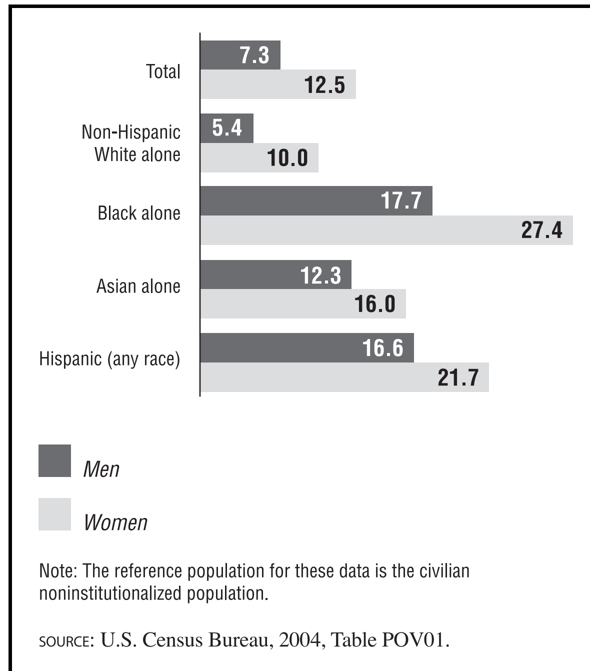


***Figure 2.*** *Percent of people aged 65 and over in poverty by sex, race, and origin, 2003.* CENGAGE LEARNING, GALE.

such as women and minorities. Although the evidence clearly shows that these groups are particularly vulnerable to spells of poverty, it is important to note that there is heterogeneity within these groups.

Marital status is significant for both older men and women; older unmarried adults have higher individual poverty rates compared to older married persons. A particularly striking subsample of this group is older women, whose poverty is intricately linked to marital patterns. For many reasons, including childrearing and other caretaking responsibilities, women often take lengthy periods of time off from the labor force, resulting in limited access to post-retirement income security plans for older women. Married women's eligibility for spouses' income tempers their lack of benefits based on their own work history. However, it has been shown that widowhood often precipitates a drop in economic well-being among women, even if women were not poor before the husband's death (Sevak, Weir, & Willis, 2003–2004).

In addition, the number of persons who will have experienced poverty by later life differs starkly by race: Hispanics and African-American elders have higher poverty rates compared to non-Hispanic. The percentage of older Black persons falling below the poverty line in 2006 was nearly one-quarter (23%) compared to only 7% of non-Hispanic Whites. Hispanic elders have a similarly high poverty rate; 19% of this population falls below the poverty threshold. Though comparatively older Asians are not as likely to be poor, still 12% of Asian elders fall below the poverty line. In addition, the cumulative lifetime risk of poverty is striking if examined by race. By the time Blacks reach the age of 75, more than 90% of them will have experienced at least 1 year in poverty, compared to 52% for Whites (Rank & Hirschl, 1999b).

It is important to note that poverty rates are calculated for the family; therefore, the composition of the household and each member's individual resources shape these differential experiences. The risk of poverty may be offset to some extent by adjusting household composition. For example, a widow with few economic resources of her own would be poor if she lives alone; if she moves in with her economically secure daughter, she would not be classified as poor. By contrast, an older couple who has income above the poverty line on their own may fall below the poverty cutoff when a grandchild moves in with them, due to the associated increase in expenses.

## CONCLUSION

Despite significant and marked improvements in poverty rates of older adults across time, the risk of poverty remains a real possibility for many older adults in the United States (Rank & Hirschl, 1999b). Although arguments can be made against the current measurement of poverty used by researchers today, the high risk of late-life poverty must be central in any discussion of later-life issues. The cumulative risk of poverty across the life course has implications for the well-being of adults in later life, by shaping adults' lifelong accumulation of wealth, pension resources, and Social Security credits.

Several unanswered questions on this topic should be addressed by future research. First, what are the long-term implications of hardship that occurs in childhood or young adulthood? For example, it may be that older adults who experienced poverty as children have a higher risk of chronic disease in later life. Second, what can we expect with respect to poverty levels among baby boomers when they reach later life? Boomers have had patterns of pension coverage, earnings histories, and asset accumulation that differ from those of their parents, which may place them at higher (or lower) risk of poverty when they retire. Additionally, how well does the current poverty measurement reflect economic hardship among older adults? Research on measurement improvements and understanding how low incomes are associated with subjective experiences of hardship is needed.

**SEE ALSO** Volume 3: *Pensions; Policy, Later Life Well-Being; Social Security; Wealth.*

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## QUALITY OF LIFE

Quality of life is a complex concept because it represents a social construct of a uniquely European and North American origin. Although definitions of what constitutes life quality may vary widely when compared across cultures, health systems, philosophies, religions, and jobs; social scientists approach the task of measuring *the quality of life* from a perspective that evolved over centuries of change in the European world view and that reflects people's perception of their place in the world community. At a minimum, an acceptable quality of life requires that an individual have food, water, clothing, and shelter beyond that required to simply survive and that he or she be healthy enough to engage in the daily activities to maintain this level of existence for an extended period. Beyond this minimal level, all measures of life quality are subjective and can only be evaluated and understood within the social context in which they occur. While all societies have a vested interest in maintaining a healthy population, the idea that it is possible to actively intercede and positively influence the quality of life at the individual, national, and even global level is a self-directed, modern, Western approach to problem resolution. To understand this concept it is necessary to see it as part of an evolving social conscience on the part of modern Western society.

### HISTORICAL EVOLUTION OF THE CONCEPT OF QUALITY OF LIFE

Scholars' understanding of the quality of life for populations in prehistoric eras remains speculative as it must be inferred from fossil records. Throughout recorded history, however, conceptualizations of quality of life typically reflect social thinking on what represents the "ideal" life attainable at that time. Historically, literal biblical interpretations dominated Western thought and behaviors for most aspects of life well into the 18th century, and Judeo-Christian principles continued to strongly influence behaviors into the early 21st century. Under this biblical tradition people's quality of life is exemplified by the life of Adam and Eve in the Garden of Eden. After the fall of humankind, this level of happiness, health, and plenty became unattainable, and an individual was forced to improve his quality of life through the sweat of his brow.

This view of quality of life gained depth and complexity as Europe, particularly England and France, formalized political science in the 17th century. This period was marked by philosophical debates that began over the roles, rights, and obligations of society, of rulers, and of citizens and how nation states collectively served the needs of their community. Thomas Hobbes and his classic publication *Leviathan* (1651) may be the best known of these early writers. He introduces the argument that to survive humans need to abide by a "social contract" that ties them explicitly to a sovereign ruler and requires them to surrender their natural rights in exchange for the peaceful existence that only life under a sovereign-led state can offer. Without this submission to a central authority, humankind could only exist in its natural state, where the quality of life was "solitary, poor, nasty, brutish, and short." In Hobbes' argument for the "Divine Rights of Kings," quality of life was completely

***Garden of Eden.*** *This 16th century painting illustrates how quality of life had once been exemplified by the life of Adam and Eve in the Garden of Eden.* © FRANCIS G. MAYER/CORBIS.

dependent upon the people's acceptance of an organized government controlled by a sovereign.

While Hobbes's work drew a number of criticisms, it was not until the early 18th century and the emergence of the Enlightenment that Hobbes's basic thesis on the absolute power of monarchy was significantly revised. *The Social Contract* written by Jean-Jacques Rousseau and published in 1762 formed a complete contrast to Hobbes's writings. Rousseau saw society emerging not as an escape from brutality and chaos but from a shared interest among people to cooperate as populations grew larger. This cooperation led them to work together to improve the quality of life for all. Rather than seeing the natural state as brutish, Rousseau argued that humankind in this state was free; neither good nor bad, and through cooperation people devised social contracts that improved the quality of life for the group. Rousseau's concept of the social contract represented an important conceptual shift, allowing people to directly influence their quality of life, something largely impossible under either a literal biblical interpretation or the Hobbesian perspective. Prevailing philosophies of the Enlightenment argued that quality of life would improve as manmade inequalities were overcome.

The following century, however, was defined by an industrial rather than a cultural revolution. The 19th century saw great gains in commerce, personal wealth, trade, expansionism, and the emergence of the European empires. However, such economic developments also were accompanied by increasing levels of social and economic inequality, which, in turn, created clear divides in the quality of life across society. Extreme differences in poverty, status, and social class resulted in social unrest, riots, and deportation laws; thus, society sought to explain how these inequalities could exist and sought new measures of quality of life. The 18th century also was marked by the belief that science represented the future; the scientific method was seen as the obvious way to explore quality of life. This represented a major philosophical shift, moving quality of life out of the realm of philosophy and into one of scientific inquiry, largely uninterested in debating social contracts, but

instead seeking ways to physically measure why some groups excelled at the expense of others.

The publication of Darwin's *Origin of the Species* in 1859 provided a "scientific" explanation for inequality within a particular social community. Darwin's biological model of evolution and adaptive change became a framework that explained inequality, poverty, industrialization, and colonial exploitation as a simple extension of the natural order. The idea of Social Darwinism was first introduced by Oscar Schmidt in 1875, less than five years after the publication of Darwin's work. It explained in the starkest of terms why some groups advance and other do not: "The free will of the morally elevated man is no common property of all mankind" (Schmidt 1875, p. 300). The implication of such writings was that civilized persons are civilized because they are naturally predisposed to be so and savages are savages because they are born as such. Consequently, a high quality of life was the direct result of biological superiority, and the poor were destined to live in poverty "as a consequence of their own retardation" (Schmidt 1875, p. 298).

This idea that some groups succeed because they are inherently superior was quickly embraced as an explanation for inequality in industrialized society. These interpretations drew heavily on early work by Hebert Spencer, particularly *Social Statics* (1851). Spencer is perhaps best known for introducing the term "survival of the fittest," in his *Principles of Biology* (1864), and this phrase came to justify harsh business and social decisions as being "*just a part of the natural order*." Although Spencer's ideas are among the most misunderstood and misused concepts in the social sciences, they made a lasting impact on the way Western society perceives inequality. Spencer saw people as intrinsically good and capable of perfection, but he also emphasized individual responsibility regardless of social barriers and institutional inequalities. His writings suggested that it was possible to "scientifically" justify gross inequalities in the quality of life between members of the same society. In essence the privileged members of society achieve a high quality of life because they evolve to the point where they deserve it (Spencer, 1883). Consequently, not only are the privileged not faulted for their high quality of life, they are also not held responsible for helping poorer members of society overcome inequality. Because quality of life is directly dependent upon people's personal progress and achievements, their quality of life improves only through their own hard work and self improvement.

This fundamental perspective of individual responsibility continues to influence Western perspectives of how quality of life is evaluated at both the individual and societal level. The underlying assumption of much research is that every person has the capacity to achieve a high quality of life, but inequality is unavoidable as some people naturally excel, whereas others lag behind due to personal weakness. While the quality of life a person enjoys, good or bad, is a direct consequence of his or her individual achievements, members of society can help others improve their quality of life, but only if those others prove worthy of such help. In other words, rather than giving people fish to improve their quality of life, teach them how to fish. With this knowledge, they should then be able to take care of themselves. If they cannot, then this inability must be due to personal flaws or weaknesses; consequently, their current quality of life may represent the best they are capable of attaining.

## MEASURING QUALITY OF LIFE

Scholars' ability to systematically define and operationalize *quality of life* through the use of a standardized measure is difficult because of variations inherent between people and societies. Despite these challenges, there is a genuine need to try to capture quality of life in a systematic manner. Definitions vary from ones as broad as that used by the World Health Organization where quality of life is "the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals" to narrowly focused instruments such as the Wong-Baker Faces scale that measure life quality (in this case, physical pain) at a precise moment in time (Wong & Whaley, 1986). These measures were designed to provide a comparative basis by which researchers can evaluate and ultimately strive to eliminate inequalities in individuals' well-being. Without some mechanism to measure quality of life, it becomes virtually impossible to develop policy, allocate resources, or make informed decisions regardless of the ultimate success of these efforts. Typically, quality of life measures can be divided into two broad categories: (a) individual measures that normally take the form of overall quality of life as well as medical or health measures of life quality; and (b) societal-level measures of the quality of life in a country, region, or area.

## MEASURING QUALITY OF LIFE FROM A MEDICAL PERSPECTIVE

The measures and scales used by the Western medical system represent one of the most common approaches to studying quality of life. Because good health is fundamental to life quality and because both disease and the treatment of sickness can disrupt the feeling of well being, quality of life in a medical context refers to "the patient's ability to enjoy normal life activities" (Hecht & Shiel, 2003). Other formal definitions offer similar summaries. The National Cancer Institute (NCI) at the National Institutes of Health (NIH) has developed

descriptions such as "the overall enjoyment of life," whereas *Stedman's Medical Dictionary* offers a more detailed assessment stating that quality of life involves "a patient's general well-being, including mental status, stress level, sexual function, and self-perceived health status."

Despite widespread agreement that health influences quality of life, its formal measurement is relatively new. One of the earliest attempts to collect information and classify quality of life was done in New York City in 1937 (New York Heart Association, 1939), when researchers attempted to define the health of elderly persons receiving public assistance. Formal measurements were based upon researchers' observations of the older persons' level of disability. A more complex index of elderly health was introduced in 1947 by F. D. Zeman, incorporating both the observed level of elderly disability and occupational background (i.e. skilled, unskilled). At about the same time, other scales were developed, such as Karnofsky's 100-point scale that evaluated quality of life among cancer patients. The scale assessed the patients' ability to engage in daily activities, their need for caregiving, and their need for medical treatment (Karnofsky & Burchenal, 1948). By the late 1950s medical scales that measured the quality of life had become far more complex. The PULSE scale (Moskowitz & McCann, 1957) represented an early attempt to incorporate emotional and cognitive states as part of overall health and quality of life measures, while the 1958 Index of Activities of Daily Living (Benjamin Rose Hospital, 1958, 1959) became the foundation for future measures of functional ability. This scale included the Instrumental Activities of Daily Living (IADL) scale introduced by Michael P. Lawton and Elaine M. Brody in 1969, one of the most commonly used measures of quality of life in both the medical and social sciences. Currently, literally hundreds of scales are available for measuring life satisfaction, particularly with respect to managing conditions such as HIV/AIDS, breast cancer, depression, and virtually any serious health condition. Jordan Matthew Prutkin (2002) provides a thorough and instructive review of the history of quality of life measures and represents an excellent source for more information.

## INDIVIDUAL MEASURES OF OVERALL QUALITY OF LIFE OR LIFE HAPPINESS

Psychological conditions, such as happiness or emotional satisfaction, are also frequently captured by quality of life assessments. Many social and health surveys ask a basic series of questions such as "How happy would you say you are?"; "How satisfied are you with the way your life has turned out?"; "How happy are you with the quality of your marriage?"; and so on. These kinds of satisfaction questions typically have respondents rate their feelings on a scale often ranging from "very dissatisfied" to "very satisfied." Because they use a standard metric, these measures offer a straightforward tool to compare levels of life quality both within and across samples. This is a powerful tool for evaluating overall life quality at the individual level. However, such measures reflect subjective appraisals. As such, one's response to a question may be biased by current stressors or by one's mood on the day of interview. Survey participants who have recently experienced emotional traumas such as disease, death, or divorce may evaluate their satisfaction based upon these immediate events, rather than stepping back and evaluating life quality across their entire life course.

Perhaps one of the most ambitious efforts to measure an individual's quality of life is the World Health Organization Quality of Life (WHOQOL) project, begun in 1991. WHO sought to create an instrument that would measure comparative quality of life across nations and across cultures. The project represents an effort to introduce cultural competence into the measurement of quality of life by allowing variations in cultures and value systems to be integrated into the assessment of personal goals, living standards, and concerns. Currently the WHO has developed a 26-item instrument—WHOQOL-BREF, a tool that touches on the domains of physical health, psychological health, social relationships, and environment. The WHOQOL-BREF is relatively easy to use, and it offers researchers an opportunity to compare local data with data obtained globally.

## MACRO OR SOCIETAL MEASURES OF QUALITY OF LIFE

Measuring the quality of life for a nation or a society has a long history, as such indicators were traditionally tied to the economic strength or potential of a nation. From works such as the classic *Wealth of Nations* by Adam Smith to ongoing economic surveillance systems, such as those used by the World Bank or the Social Weatherstation series, quality of life is measured through broad summary measures such as gross domestic product (GDP), life expectancy, literacy rates, and employment statistics. For example, the *Tables of Economic and Social Indicators* have been used by the World Bank (2008) since 1950 to rank developed and developing nations based upon their economic stability. Similarly, the United Nations (2008) *Demographic Yearbook* has collected information on population size and composition, births, deaths, marriage, and divorce on an annual basis since 1948. These kinds of resources allow comparative measures on quality of life to be developed across nations. Longevity, fertility, infant mortality, and GDP all represent direct indicators of quality of life. However,

## SUCCESSFUL AGING

Successful aging consists of three interrelated elements: an active lifestyle, a relatively low risk of disease, and high levels of physical and cognitive functioning. Early societies recognized the value of successful aging, ascribing special status to long-lived people. For example, in the Hebrew Bible*,* extreme old age was a characteristic of key patriarchs, revealing the esteem conferred on such people. In the modern world, with worldwide increases in longevity, many old people now suffer from chronic disease and disability. As a result, long life can be viewed negatively—as an outcome of medical interventions (e.g., pacemakers, bypass surgery)—or positively—as a trait of those old people who successfully negotiate the aging process through exercise, good diet, and the benefit of genetic advantages. Life course scholars interested in successful aging now seek to identify mechanisms that will lead to improved health and greater longevity for older adults. Most scholars agree that healthy lifestyle changes represent immediate returns to old people in terms of successful aging and benefit all people regardless of their genetic makeup and current health status.

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these snapshot measures reflect European and North American notions of what "quality" is, and these measures, in turn, shape both how scholars and laypersons assess the quality of life worldwide. They also guide where policy makers focus resources to make changes. Some Asian societies often have different perspectives on the concept of *life quality*, hold different attitudes toward birth and death, and propose different ideas about the direction their societies should take in their efforts to achieve the highest quality of life possible. Measures such as those developed by the World Bank and the United Nations are useful but they, like the concept of quality of life itself, are constantly being refined as scholars learn more, obtain better sources of information, and broaden their definitions to include non-Western perspectives of what defines a life of quality.

### CONCLUSION

Conceptualizations of quality of life reflect individuals' beliefs about how they stand in relation to other members of society. The approach to conceptualizing quality of life is guided by hundreds of years of philosophical debate, as well as more recent changes in how one defines *well-being* in a period of development and innovation. There is no one definitive definition of *quality of life*; however, what most definitions share is an effort to evaluate life quality in terms of equity and in terms of how an individual lives relative to other members of his or her recognized community.

**SEE ALSO** Volume 3: *Social Integration/Isolation, Later Life; Social Support, Later Life.*

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***James W. McNally***

# R

## RELIGION AND SPIRITUALITY, LATER LIFE

Religion has been an important topic in the social and behavioral sciences since their inceptions. From the beginning, sociologists and psychologists have focused on very different aspects of religion. Émile Durkheim (1858–1917) set the stage for sociological views of religion, defining it as "a unified system of beliefs and practices which unite into one single moral community, called a Church, by all who adhere to them" (1912/1951, p. 44). Durkheim believed that religion serves important functions for both societies and individuals: stabilizing and integrating societies and providing a moral compass for believers. William James (1842–1910), the father of psychological inquiry in religion, had a very different focus. His primary premises are that religious feelings are psychological facts that benefit individuals by transforming their personalities, their understanding of the meaning of life, and their values. He contended that religious or spiritual feelings are experienced most frequently during times of solitude, contemplation, and personal ritual. Unlike Durkheim, James had no respect for organized religion. In his words, "When a religion has become orthodox, then the time of spiritual value is over" (1902/1997, p. 72). These very different views of religion are the cornerstone of modern conceptions of religion and spirituality. It remains true that sociologists are the primary investigators of religion and psychologists more often focus on spirituality.

Before proceeding, a caveat is in order. The vast majority of research on social and psychological facets of religion and spirituality is based on samples from North America and Western Europe, especially the United States. Thus, knowledge about the life course dynamics of religion and spirituality is limited to specific countries and specific religious traditions.

### DEFINITIONS AND MEASUREMENT

Scholars disagree about how to define religion and spirituality and, especially, about the extent to which they are distinct versus overlapping. Increasingly, however, scholars rely on the definitions offered by Hill and Pargament (2003), who view religion and spirituality as having in common the "search for the sacred, a process through which people seek to discover, hold on to, and, when necessary, transform whatever they hold sacred in their lives" (p. 65). The difference between religion and spirituality is that the former rests on the beliefs and practices of a community of believers—a community that shares religious beliefs, practices, and identity. In contrast, spirituality is more often defined as a search for the sacred that can, but need not, rest on religious traditions.

Individuals cannot be neatly sorted into those who are religious and those who are spiritual, however. Research that includes measures of both religious participation and spiritual practices outside of organized religion consistently reports strong positive relationships between the two. That is, the vast majority of people who participate in organized religion also engage in personal spiritual practices. Nonetheless, a sizable minority of the population does not participate in organized religion but report that they believe in God or a higher power and engage in personal spiritual practices (Zinnbauer et al., 1997).

Religious involvement takes multiple forms. A panel of experts identified 11 dimensions of religious participation relevant to health (Idler et al., 2003): religious affiliation (e.g., denomination), religious history and socialization, public religious practices (e.g., attending services), private religious practices (e.g., prayer/meditation, reading sacred texts), religious social support, religious coping, beliefs and values, religious commitment, forgiveness, daily spiritual experiences, and self-ratings of religiousness. Although these dimensions are especially relevant for research on the relationship between religion and health, according to Idler et al. they also comprise a relatively comprehensive view of religious participation in general. Based on data on all 11 dimensions from a nationally representative sample of American adults, the correlations across dimensions of religious involvement are positive but relatively weak (Idler et al., 2003). This pattern indicates that the dimensions are distinct, probably have different antecedents and consequences, and may exhibit different dynamics over the life course.

Because the scientific study of spirituality is quite recent, fewer measures are available and it is unclear whether there are distinct dimensions. Nonetheless, some dimensions of religious involvement listed above can be spiritual practices that occur outside of organized religion. Private "religious" practices (e.g., prayer, meditation), daily spiritual practices, and forgiveness, for example, can be practiced outside of any religious tradition.

## RELIGIOUS INVOLVEMENT: AGE AND LIFE COURSE PATTERNS

The United States is, without question, the most religious nation in the Western world. A 2004 survey of a representative sample of American adults found that 66% reported that "I have no doubt that God exists," 74% prayed several times a week or more, and 49% attended religious services once a month or more (Association of Religious Data Archives, 2008). In this and other surveys from the early 21st century, older adults reported even higher percentages. In a 2001 Gallup poll, for example, 60% of Americans ages 50 to 64, 67% of those ages 65 to 74, and 75% of those ages 75 and older reported that religion is very important to them (Gallup, 2002). In that same poll, 44% of people ages 50 to 64, 50% of those ages 65 to 74, and 60% of those ages 75 and older reported that they had attended religious services in the past week. In contrast to the United States, levels of religious participation are much lower in Europe and other Westernized societies (Crockett & Voas, 2006).

Because these surveys are based on cross-sectional data, it is not clear whether these age differences are due to an increase in religious participation across the life course or whether older cohorts have been more involved in religion than younger cohorts throughout their lives. Two types of studies have investigated whether the positive association between age and religious participation represents age or cohort effects. There are theoretical reasons to expect both patterns. The "life cycle" hypothesis suggests that as adults enter late life they increasingly turn to religion to find meaning in the lives they have lived and prepare for death (e.g., Erikson, 1982), suggesting an aging effect. In contrast, the "secularization hypothesis" argues that since World War II, religious participation has declined across cohorts as a result of increasing levels of education and the prestige of science (Presser & Chaves, 2007).

In the first type of study, investigators assemble repeated cross-sectional surveys collected over decades and longer and use these data to determine whether age groups exhibit the same levels of religious participation regardless of when they were born—or if different birth cohorts report different levels of religious involvement, regardless of age. These studies focus exclusively on rates of attending religious services, and the results are mixed. In the United States, disagreement continues about whether rates of religious service attendance have declined substantially since World War II (e.g., Presser & Chavez, 2007) or declined only slightly (e.g., Putman, 2000). One study found no decline in attendance between 1990 and 2006 (Presser & Chaves, 2007). These studies provide minimal support for the secularization hypothesis and no support for the life cycle hypothesis. In contrast, church attendance in Europe has declined dramatically since World War II (Crockett & Voas, 2006), providing strong support for secularization there.

Second, a few studies used longitudinal or retrospective data to trace intraindividual patterns of religious involvement across the life course. Ingersoll-Dayton, Krause, and Morgan (2002) used retrospective interview data to identify distinct patterns of religious involvement in multiple dimensions. Four trajectories were identified for each: stable, increasing, decreasing, and curvilinear (i.e., U-shaped) patterns. Stable and curvilinear patterns were most common. The curvilinear patterns were generally tied to specific events, with increases often triggered by the birth of children and adverse life experiences and decreases most often resulting in disillusionment with clergy or church members. Using longitudinal data from adolescence until age 32, Stolzenberg, Blair-Loy, and Waite (1995) examined patterns of religious services attendance over time. They reported substantial change in attendance over the course of adolescence and early adulthood, with both increases and decreases very common. These changes in attendance are linked in complex ways with changes in marital status and the birth and ages of children. Some of these role transitions also operate differently for men and women; for example,

***Belated Call.*** *Ed Schreiber, 96, prays during the traditional laying on of hands at his ordination in the Cumberland Presbyterian denomination on June 21, 2000, in Adairville, KY. Schreiber, of Nashville, TN, began his seminary studies at age 92.* **AP IMAGES.**

divorce tends to be followed by increased church attendance for women and decreased attendance for men. Finally, Paul Wink (2003) examined a composite index of religiosity in a longitudinal study of two cohorts, born 10 years apart, from childhood through early old age. Seven measurements were taken over approximately 50 years. In both cohorts, religious involvement was overwhelmingly stable over the life course.

Age patterns of religious involvement take different forms, depending on the research design. There are substantial differences across cross-sectional, repeated cross-sectional, and longitudinal studies. Although longitudinal data are preferable, the few studies available suggest that length of observation and the time interval between measurements affect research results. With regard to the latter point, in the longitudinal study that examined the dynamics of religious involvement between adolescence and young adulthood, frequent changes in levels of church attendance were observed. In the longitudinal study spanning 50 years, however, overwhelming stability was observed. In this study, however, measurements were often a decade or more apart; thus, substantial unobserved change could occur between measurements. Perhaps the most interesting aspect of both groups of studies, however, is what was *not* found. There is little evidence that the higher rates of religious participation reported by older adults are a result of cohort differences. At the same time, studies of intraindividual change fail to observe meaningful increases in religious involvement in late adulthood.

In addition to age differences, gender and race/ethnicity also are strongly related to religious participation. Women report higher levels of religious involvement than men at all ages (Idler et al., 2003). In the United States, African Americans report the highest levels of religious involvement of any racial/ethnic group, especially in comparison to Whites (Idler et al., 2003). Again, these racial/ethnic differences are found throughout adulthood.

One form of religious participation, attending religious services, would seem to be more dependent on health than other more private and personal forms. Detailed reports of levels of religious attendance during late life indicate that attendance is lower among the oldest-old (i.e., age 80 or 85 and older) than among adults ages 65 to 79 (Gallup, 2002). An important longitudinal

study of the effects of disability on religious participation, however, found that religious attendance dropped temporarily after the onset of disability but typically rebounded to predisability levels (Idler & Kasl, 1997).

## SPIRITUALITY: AGE AND LIFE COURSE PATTERNS

Although many studies of spirituality, especially among older adults, have appeared since the late 1990s, almost none of them are based on longitudinal data covering sufficient years to provide insights about cohort differences, age changes, and life course patterns of spirituality. The notable exception to this is a series of studies by Wink (2006), Wink and Dillon (2002), and Wink and Scott (2005). Data for these studies are from the Berkeley Growth Studies, which began in the 1920s and followed two cohorts from childhood through late life. Data collection spanned approximately 50 years, with seven times of measurement. Not surprisingly, the Berkeley Growth Studies do not include what are now viewed as standardized methods of assessing spirituality and religion. To examine long-term patterns of religion, spirituality, and other phenomena, trained raters examined the full range of data collected at each time of measurement and generated ratings, using the same metric at each test date. Thus, the aforementioned research was based on ratings of degree of religiousness and degree of spirituality. Because these are composite ratings, it is not possible to examine specific dimensions of religious or spiritual experience.

With regard to spiritual development, these investigators found that, by early adulthood, individuals vary substantially in the extent to which spiritual issues are important to them (Wink & Scott, 2005). Whatever this "baseline" level of spirituality, it tends to remain quite stable until the late 50s or early 60s, after which a demonstrable increase in concern about and exploration of spiritual issues occurs (Wink & Dillon, 2002). Although there is a general pattern of increasing spirituality during later life, some individuals exhibit greater increases than others—and a few show no increase at all. The major predictors of increases in spirituality in later life are (a) a history of sustained religious involvement, (b) openness to new experience—a personality characteristic measured in early adulthood, and (c) an accumulation of multiple negative life events or stressors across the adult life course (Wink & Dillon, 2002). The strong relationship between sustained religious involvement during adulthood and increased spirituality in later life highlights the fact that religion and spirituality can never be viewed as either/or commitments. For most American adults, religion and spirituality are overlapping commitments. Women are rated as having higher levels of spirituality at all ages (Wink & Dillon, 2002), although an increase in spirituality in late life is true for both men and women.

An important part of Wink and colleagues' research agenda has been to compare the effects of religiosity and spirituality on well-being. Overall, religiosity is associated with more elements of well-being than spirituality. Specifically, religiosity is associated with closer, more satisfactory interpersonal relationships, greater community involvement, higher levels of life satisfaction, and less death anxiety. Spirituality is not related to these outcomes (Wink, 2006). Similarly, high levels of religiosity lessen the effects of physical illness on depression (Wink, 2006). Spirituality does not exhibit this buffering effect. In contrast, however, higher levels of spirituality are associated with a greater sense of personal growth, and religiosity is not.

The Berkeley Growth Studies have made unique and important contributions to knowledge about life course patterns of both religiosity and spirituality. Nonetheless, these studies also have serious limitations. For example, the participants in these studies were all White, and socioeconomic variability was limited. Also important is the fact that the measurement strategies forced upon investigators by the age and design of the studies would be judged unacceptable by current standards. Clearly, there is much left to learn about age changes, cohort differences, and life course patterns of spirituality.

**SEE ALSO** Volume 2: *Durkheim, Émile;* Volume 3: *Social Integration/Isolation, Later Life.*

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## REMINISCENCE

SEE Volume 3: *Wisdom.*

## RESIDENTIAL MOBILITY, LATER LIFE

Residential mobility, defined as a change of address, occurs during the life course of almost every person in the Western world, and is experienced in the United States by a majority of people after 60 years of age. Most changes of address, however, are over short distances; these are local "housing adjustments." Most of these short moves have relatively little impact on the movers' activities, time use, social roles, or social networks. They are, in other words, mundane, and while they contribute to socioeconomic and environmental changes, such as housing price trends, most have only minor consequences for older people's lives (Longino & Warnes, 2005). The exception to this generalization is moves into local long-term-care settings.

Two other categories of mobility have more radical consequences for older people's lives. First, long-distance moves across important political boundaries substantially alter people's daily activities, social contacts, and life prospects. This type of move is called "internal migration." It is internal to national boundaries and crosses state or county lines, the defining characteristic of migration. In the context of later life it is sometimes referred to as "retirement migration" (Haas, Bradley, Longino, Stoller, & Serow, 2006). Following this type of move, there is often a need to find new doctors, churches, volunteer activities, and friends. It has an important impact on the lives of the movers. Second, "international migration" from one national culture to another is an additional and even more radical type of move.

### MIGRATION SELECTIVITY

"Who Moved among the Elderly" was the title of the first comprehensive census analysis of the population characteristics of older mover types (Biggar, 1980). J. C. Biggar's article made a very strong statement, showing that there were distinctive profiles among the various elderly mobility categories (nonmovers, local movers, intrastate migrants, and interstate migrants). Residentially mobile local movers, in contrast to nonmovers, had lower average incomes, and a higher proportion of local movers were living dependently with others. By contrast, interstate migrants were younger on average, more often married, more likely to live in their own homes, and had higher average incomes and education than persons in the other mobility categories.

L.E. Hazelrigg and M. A. Hardy (1995) extend Biggar's work by comparing the income characteristics of older migrants with nonmigrant age peers at their destinations. They found that the migrants were economically better off. They attributed this to the tendency of migrants to move to locations with a somewhat lower cost of living than at their origin. Cost of living and income are higher in large cities and their suburban counties where many migrants originate. Also, some important selectivity factors are at work. Moving is costly, and this tends to screen out those who cannot afford to make a distant move. Further, lifestyle-driven amenity migrants tend to move soon after retirement, before there is any decay in their retirement income relative to more recent retirees. As a caution, W. J. Serow (2001) adds that where destinations have a strong attraction to tourists, cost of living tends to be higher and so do incomes. W. H. Walters (2002) provides a reminder

**Snowbirds.** *Carol Waugh (L), Bob Passaro, and JoAnn Warnke ride in the back of a truck after a round of golf at the 18-hole desert golf course at Slab City. A former military base in the California desert, Slab City was known as Camp Dunlap during World War II, 80 miles southeast of Palm Springs. Thousands of "Snowbirds," retired people seeking warm weather in the winter, descend upon Slab City from November to April every year.* KATIE CALLAN/CORBIS.

that it is fairly common for studies to include personal attributes of migrants and seek to infer mobility motivation from them.

## PATTERNS OF MIGRATION IN THE UNITED STATES

One way of describing migration destinations is to rank the states or counties that received the largest proportions of later life migrants. Between 1960 and 2000 the U.S. census asked where one lived exactly 5 years before the census: in the same house, in another county in the same state, in another state, or abroad. Using this 5-year item, the numbers and proportions of interstate and intrastate migrants can be compared over time. Interstate migration has held very steady for migrants age 60 and older at 4.0% to 4.6% (Longino, 2006). Short-distance migration within states has declined since 1960 for persons of all ages. Census microdata, a small sample of long-form census records, has been handy for making such comparisons. Since 2000, this program has been replaced by the American Community Survey, an annual survey of 1% of the U.S. population, which asks where one lived 1 year (not 5 years) before. Thus, the observed patterns will shift as future migration studies will assume this new metric.

One of the major features of interstate late-life migration is that the migrants coming from many states are concentrated in only a few destinations, a result of highly focused flows into certain states. In 2000 more than half of older migrants (54%) arrived in just 10 states, having lived in other states 5 years before. In descending order, these states were Florida, Arizona, California, Texas, North Carolina, Georgia, Nevada, Pennsylvania, New Jersey, and Virginia (Longino, 2006).

Using the 2000 census microdata files, the top 100 counties or county groups have been ranked in terms of net interstate migration. Although these substate destinations tend to be within the leading destination states, there is greater variety than is commonly assumed. Ocean County, New Jersey, for example, has consistently received enough retirees from New York and Pennsylvania to keep it among the top 100 interstate destinations for several decades (Longino, 2006). The 100 counties in

2000 sending the largest numbers of interstate migrants to other states were nearly all metropolitan and suburban counties, and more than half (58) were outside the Sun Belt.

## CONCEPTUAL MODELS OF LATER LIFE MIGRATION

Attempts to understand the dynamics of general migration began in the late 19th century with a seminal paper presented at the Royal Statistical Society of London by E. G. Ravenstein (1885) and elaborated some 70 years later by Everett S. Lee (1966). This decision model emphasized the attractions of the destination and the repulsions of the origin—pushes and pulls. R. F. Wiseman (1980) applied this framework to later life migration, and it has been very useful for examining the triggering mechanisms, needed resources, and feedback loops involved in residential adjustment. He identified two categories of older migrants. "Amenity" migrants are younger and have richer economic and social capital resources. "Assistance" migrants are the opposite, and often with more severe health problems. W. H. Haas and W. J. Serow (1993) expanded further, focusing on amenity migrants. C. F. Longino et al. (2008), in a national, prospective study, found that family and community ties at the origin hold back migration, and having vacation homes and regular vacation sites tend to encourage it.

P. H. Rossi (1955) may have been the first to carefully analyze age and mobility, showing that younger people move for many reasons related to their need to establish educational, work, and family statuses. It was just a matter of time until Rossi's approach was extended to later life mobility that is related to retirement and health.

E. Litwak and C. F. Longino (1987) were the first to present a developmental context for understanding the patterns of older interstate migration that are now commonly reported in demographic studies. They argued that retirement and health put older people under pressures to make three basic types of moves. The first type involves persons who are recently retired; these are often amenity-driven moves. A second type includes persons who are usually somewhat older than amenity migrants and who are experiencing moderate forms of disability (Miller, Longino, Anderson, James, & Worley, 1999), a situation often compounded by widowhood. Movement toward family members is one result (Silverstein & Angelelli, 1998). These migrants are said to be making assistance-motivated moves. A third type is an institutional move when health problems overwhelm the capability of the family to care for older relatives in the community. These are nursing home moves. The concept of life course stage applies here to populations and not necessarily to individual persons. Because migration is a youthful phenomenon, even in later life, there are more amenity-motivated than assistance-seeking migrants, but an individual may experience any combination of the three moves, or none at all.

A final conceptual framework that began to emerge during the 1990s is what has been referred to as the place identity model (Cutchin, 2001). Some migrants never put down roots but remain emotionally tied to their former communities. Some of them have problems changing from being a vacationer to being a permanent resident after they arrive. Indeed, some put on an "ageless self" identity when joining the ranks of the active retirees in their new communities, maintaining the energy levels of productive middle-aged persons (McHugh, 2000).

The overwhelming finding of assessment studies, in which older migrants are interviewed about their experience, is that retired migrants make positive assessments of their own moves, the main exception being that women express some dissatisfaction with their reduced contacts with friends, children, and metropolitan facilities (Warnes, King, Williams, & Patterson, 1999). Most moves are undertaken after careful and extended thought and planning.

## PROSPECTS

Most commentators suggest that later life migration will grow in the foreseeable future, as a consequence of increased affluence and home ownership, further advances in telecommunications and transport, increased longevity, and the progressive transition from family-oriented to individualistic lifestyles. The baby boomers, that large segment of the U.S. population born between 1946 and 1964, will also swell the older population as they retire. This growth in the total number of migrations in the retirement-aged population may imply an increased number of migrants to many of the early 21st century's most popular destinations.

However, there may also be many previously unnoticed destinations that by the year 2030 will swell with retirees. Property costs may escalate in well-established locations in response to growing demand (Serow, 2001), as entrepreneurs quickly develop alternative opportunities. A substantial dispersal of some of the preferred destinations appears likely, and indeed is evident in Florida's decline from receiving a 26% to a 19% share of older interstate migrants nationally between 1980 and 2000 (Longino, 2006).

An alternative scenario is also possible. Another popular prediction is that the sharp division between the working and retirement ages will progressively dissolve. Some say that part-time, temporary, or full-time employment is necessary for the highest standard of living in

later life. If income generation comes increasingly to be linked to positive retirement, then it may be important for the older person to remain in the region in which they have good employment-related connections (Longino & Warnes, 2005).

**SEE ALSO** Volume 3: *Aging in Place; Assisted Living Facilities; Long-term Care; Neighborhood Context, Later Life; Retirement Communities.*

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*Charles F. Longino, Jr.*

# RETIREMENT

Retirement is defined broadly as the departure event in an individual's life course from a phase of the occupational life cycle (Atchley, 1993, 1996). Rather than a mere withdrawal from paid work, retirement in contemporary social contexts is a complex process inextricably linked with social structures and individual life adjustments. Typically, retirement involves reliance on pension instead of salary as the primary means of financial support and adapting to new options in later life such as leisure pursuits, voluntary activities, and second careers (Szinovacz, 2003). Furthermore, many contemporary workers do not make a clear-cut break from full-time jobs one day to complete retirement the next. Pathways to retirement in the early 21st century are diverse and individualized processes that connect working lives to lives in complete retirement (Quadagno & Hardy, 1996).

## MEASUREMENT AND THE IMPORTANCE OF STUDYING RETIREMENT

Mainly because of the diversity in the pathways taken into retirement, there is no single generally agreed-on way to measure a person's retirement status. Nonetheless, researchers often rely on either one or both of two major criteria to measure retirement status: (a) a person's self-definition of current work status and (b) objective indicators concerning a person's retirement status. The objective indicators consist mainly of receipt of pension income as one's main source of income, total cessation of formal employment, departure from a career job of adulthood that had lasted 10 years or longer, and a significant reduction in hours or days worked for wages (Gendell & Siegel, 1992).

When measuring a person's retirement status, retirement researchers have faced three major challenges: women's retirement status, discouraged workers, and the increased complexity of contemporary workers' pathways

to complete retirement. First, because of employment interruptions of greater frequency and longer duration, women's work histories tend to be more irregular than those of men. This general tendency makes women's transition from employment to retirement less clear and thus more difficult to measure than that of men (Szinovacz, 2003). Second, there is difficulty in measuring the retirement status of older discouraged workers. A discouraged worker refers to an unemployed person who is eligible to participate in the labor force but has given up seeking employment primarily because of the unavailability of employment options that she or he considers suitable (Schulz, 2001).

Although discouraged workers are not counted among those currently in the labor force, they are also not counted in unemployment rates because of the somewhat voluntary nature of their nonworking status. Thus, controversy exists as to how many older people who consider themselves retirees actually fall into the discouraged worker category (Bjørnstad, 2006). Third, the increasing complexity of the transition from full-time employment to complete retirement makes it difficult to measure a person's retirement status. In the early 21st century, only about half of older workers move from full-time employment to complete withdrawal from the labor force in a single step. The other half pass through a period of partial retirement on the way to complete retirement, or reverse the retirement process by reentering the labor force. As many as one-third of retirees become reemployed, often within 1 to 2 years of their first retirement (Hardy, 2006).

As most industrial countries, including the United States, have faced the challenges of population and workforce aging, retirement has become an increasingly important issue. In the United States the upcoming retirement of the baby boomers, the generation born between 1946 and 1964, has led to two major concerns. The first concern is the potential loss of a significant number of skilled and experienced workers who are vital to the maintenance of economic productivity (Hardy, 2006; Rix, 2004). Because of the impending retirement of such a large cohort, U.S. labor force growth is expected to decrease from 1.1% per year in the 1990s to 0.36% per year during the period between 2010 and 2020 (Organisation for Economic Co-operation and Development [OECD], 2005). The second concern is the anticipated fiscal burden on the rest of the society. The retirement of the baby boomers is expected to increase public expenditures associated with Medicare, Medicaid, and Social Security. In response to these concerns, much effort has been made to examine these issues with a focus on current and projected future trends in employment rates especially among those ages 55 and older. Therefore, it is important to study the influence of current policies on the patterns of retirement for the baby boomers as well as how new employment practices and public policies may improve the boomers' working lives and the quality of their life in retirement (Munnell & Sass, 2007).

## HISTORY OF RETIREMENT AS A SOCIAL INSTITUTION

Retirement as a social institution developed and became widespread during the 20th century, particularly among the industrialized countries (Atchley, 1996; Williamson & Pampel, 1993). In the industrialized countries of the early 21st century, most workers leave the labor force between the ages of 55 and 65 (Social Security Administration, 2006–2008). For instance, between 1990 and 1995, the median age for men's retirement was 60.4 in Germany, 62.3 in Sweden, 64.7 in Japan, and 62.1 in the United States. Women's median retirement age for the same period was 59.1 in Germany, 62.4 in Sweden, 62.3 in Japan, and 62.6 in the United States (Gendell & Siegel, 1992).

Retirement began to be institutionalized only after the Industrial Revolution of the 19th century (Costa, 1998). Two main factors led to the institutionalization of retirement during the 20th century. The first was a mutual agreement between employers and workers fixing the age for withdrawing from employment. Employers needed to replace high-salaried older workers with lower-salaried younger ones in order to speed up production and get more out of workers. Workers' unions agreed to fixing the age for mandatory retirement in exchange for greater job security until reaching that age. Although ages for mandatory retirement rules varied by sectors and economy and occupations, they were set mostly between 55 and 60 (Atchley, 1993). The second factor was the need to find a way to support the increasing number of older workers, many of whom were finding it very difficult to obtain work. In the 1880s Otto von Bismarck, the Prussian chancellor of Germany, introduced the world's first public pension system. It called for a massive intergenerational income redistribution scheme designed to help meet the income needs of workers ages 65 and over. Soon many other European nations were introducing similar schemes (Shulz & Myles, 1990).

In the United States the institutionalization of retirement picked up steam during the 1920s with the introduction of old-age pension schemes in many states and with the expansion of corporate pension schemes; much more important, however, was the introduction of a federal old-age pension scheme embodied in the Social Security Act of 1935. The introduction of this national public pension program made leaving the labor force much more attractive to older workers starting in the

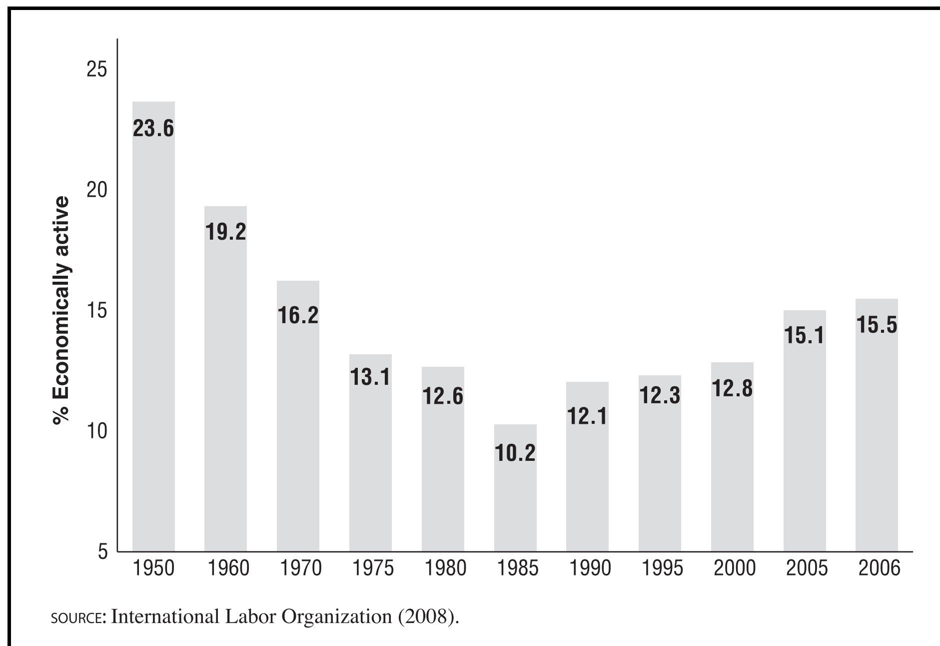


***Figure 1.*** *Civilian labor force participation rates in the U.S. for people age 65 and for the years 1950 through 2006.* CENGAGE LEARNING, GALE.

1940s. The pension program at first provided only small benefits. Later, increases in benefit levels meant that Social Security replaced a larger part of a worker's pre-retirement income. The availability of retirement options gradually restructured the time workers spent in the labor force before leaving to spend time in various leisure activities and other efforts directed at self-fulfillment in later life (Atchley, 1993). In 1890, 68% of men over age 65 were in the labor force, but that figure dropped to 54% by 1930. In 1950, after Social Security had been in place for several years, the portion of men over age 65 in the labor force dropped further to 46% and continued to decline to below 17% by 1989. The average retirement age of men dropped from 74 in 1910 to 67 in 1950. It continued to drop through the mid-1980s, when the average age stood at 62 (National Academy on an Aging Society, 2000).

In the United States, there was a trend toward an increasing prevalence of "early retirement" through the mid-1980s (Clark & Quinn, 2002). Early retirement refers to withdrawal from the labor force before age 65, the age of eligibility for retirement with the full benefit of Social Security. One factor driving the trend of early retirement was a change in Social Security policy in 1961 allowing workers to start receiving their pensions at age 62, albeit with about a 25% reduction of the benefit they would be entitled to receive if they waited until age 65 (Gall, Evans, & Howard, 1997). Also, to save on the high salaries of older workers, many companies were offering early retirement packages, including bonuses, to workers between the ages of 55 and 60. About 9 out of 10 U.S. pension plans, particularly for white-collar workers, provide financial incentives for early retirement (Clark & Quinn, 2002).

In 1950, as Figure 1 shows, 23.6% of workers (men and women combined) ages 65 and older remained in the labor force. By 1960, the figure was down to 19.2%. It steadily decreased until the mid-1980s. In 1985 the labor force participation of men and women ages 65 and older reached a low of 10.2% (International Labour Organization, 2008). That year, almost 25% of those 51 to 59 years of age did not work. During the 1980s, about 75% of all new Social Security beneficiaries each year retired before their 65th birthday, and most began collecting retirement benefits at age 62.5 (Quinn & Burkhauser, 1994; Toossi, 2002). Figure 1 also shows, however, that since the early 1990s the long-range trend toward earlier and earlier retirement has reversed. By 2000, the labor force participation rate for people, both men and women, ages 65 and older (12.8%) became higher than that of 1980 (12.6%). The participation rate rose further to 15.5% by 2006 (International Labour Organization, 2008).

At least for now, the early retirement trend among older Americans certainly appears to be over (Hardy, 2006; Quinn, 1997a). The end of this trend is largely attributable to three factors. The first is the strong

macroeconomic performance of the U.S. economy through the 1990s (OECD, 2005). Second, 1983 amendments to the Social Security Act started to delay the age of eligibility for full benefits and increased the financial penalty for receiving early benefits at age 62 (Munnell & Sass, 2007). The final factor is employment practices and public policy initiatives that have increased older workers' options regarding pathways to full retirement (Butrica, Schaner, & Zedlewski, 2006).

## COMMON PATTERNS OF RETIREMENT

Throughout much of the 20th century, Americans viewed retirement as an event that occurred once in a lifetime and involved an immediate and complete withdrawal from full-time employment (Rix, 2004). Retirement in the 21st century, in contrast, has come to be characterized by a variety of pathways to complete retirement. Retirement research has developed four conceptual categories of retirement behavior based on the observed patterns and trends in the United States: (a) partial retirement, (b) bridge employment, (c) unretirement, and (d) joint retirement. These conceptual categories are not a mutually exclusive set of retirement behaviors; rather they are common occurrences that retirement researchers have noted.

Partial retirement, also known as phased retirement, is a generic term broadly referring to the process of gradually phasing into complete retirement though reduced work hours and job responsibilities, which may even involve changing one's workplace and occupation (Clark & Quinn, 2002). From 1960 to 2002 the proportion of older men who worked part-time rose from 30% to 43.6%, whereas that of women rose from 44% to 58.2% (Rix, 2004). About 40% of men and 35% of women ages 55 to 64 who received income from a pension in 2005 were still employed as of March 2006 (Hardy, 2006). Watson Wyatt Worldwide (2004) found that 57% of those workers currently in partial retirement entered into the arrangement voluntarily in order to have more leisure time. Brown (2005) reported that about 76% of workers ages 50 to 65 plan to continue working after age 65 primarily because of financial reasons. Such a gradual pathway to complete retirement enables older workers to adjust better to life in retirement and simultaneously allows employers to make gradual changes instead of coping with the abrupt departure of a well-integrated employee (Rix, 2004).

Bridge employment, a growing labor force participation pattern among older workers in the early 21st century, refers to work between their career jobs and complete retirement, which is either part-time or lasts fewer than 10 years, or both (Quinn, 1997b). Although used as a form of partial retirement, bridge employment is considered a distinct category of retirement because it involves an exit and reentry to the labor force, rather than a mere gradual reduction of hours or days worked (Clark & Quinn, 2002). As of 2004, about 73% of men and 46% of women ages 51 to 61 had a full-time career job.

By 2005, among those who had already retired from full-time career jobs, about 60% of workers, men and women combined, reentered the labor market and worked at a bridge job. More than half of these bridge jobs were part-time (Cahill, Giandrea, & Quinn, 2006).

The term *unretirement* refers to workers who reenter the labor force because of unwarranted optimism about their financial security, which had led them to retire too early, or because of unexpected financial shocks in retirement (Hardy, 2006). Unretirement is most common among retirees in their early to mid-50s, typically occurs within the first 2 years of first retirement, and lasts an average of 4 years. About 24% of those in this age group who originally retired from their career jobs unexpectedly reenter the labor force (Maestas, 2004). Unretirement usually involves jobs similar to bridge employment. They generally require fewer work hours, pay lower wages than a career job, and are more likely to involve a shift from being an employee to being self-employed (Hayward, Hardy, & Liu, 1994).

Joint retirement is a pattern of retirement that involves a simultaneous sequence of work and final withdrawal from the workforce by a working couple. Research has suggested that availability of employer-provided retiree health insurance is an important factor in the retirement decision, particularly for older workers. The likelihood of joint retirement—timing retirement together—more than doubles when wives have employer-provided retiree health insurance (Kapur & Rogowski, 2007).

## PLANNING AND TIMING OF RETIREMENT

Retirement involves more than a decision to withdraw from the labor force; it also involves a decision as to when and how to retire. Quinn and Burkhauser (1994) reported that 65% of men and 55% of women were able to retire near their desired retirement ages. Only about 10% of men and women were able to or had to retire before their desired retirement ages. About 25% of men and 32% of women needed to remain in the labor force longer than they had planned to. Retirement researchers have identified four major factors that largely determine the timing of a person's retirement: (a) availability of adequate retirement income, (b) health status and accessibility to health insurance, (c) job satisfaction, and (d) employment and retirement policies.

First, an adequate income, through a combination of Social Security, a private pension, and interest income, directly affects the feasibility of retirement. Financial status also impacts worker health and job satisfaction. When given a choice, assuming financial security and adequate health insurance, most people elect to retire as soon as they can (Flippen & Tienda, 2000).

Second, a person's health status, including physical and mental functional limitations and accessibility to health insurance, is an important factor in the retirement decision, especially among those for whom retirement is least attractive (Moon, 2002). Poor health, when combined with an adequate retirement income, usually results in early retirement. In contrast, the combination of poor health and an inadequate income often does not lead to early retirement particularly among low-income workers (Mutchler, Burr, Massagli, & Pienta, 1999).

About 55% of retirees between the ages of 51 and 59 report that a health condition or impairment substantially limits the amount or type of work they can do. In addition, retirees are three times more likely to be in fair to poor health than their employed counterparts (National Academy on an Aging Society, 2000).

The third factor affecting retirement timing is workers' satisfaction with their jobs, which is often determined by the workers' attachment to the job, organizational commitment, and the nature of a job (Taylor & Doverspike, 2003). Some workers retire to escape undesirable working conditions such as boring, repetitive, and stressful jobs and work environments. Workers who have a positive attitude toward retirement and leisure but are dissatisfied with their jobs are likely to retire early. Employees with a high school education or less tend to show lower job satisfaction and thus retire earlier than well-educated employees (Quinn & Burkhauser, 1994).

Fourth, public policies and employment practices affect the timing of retirement. For example, the 1986 amendment to the federal Age Discrimination in Employment Act, which abolished mandatory retirement, has protected workers both in the private and public sectors from forced retirement based on their age. This policy allows workers to choose to stay at work longer if they elect to do so. Prior to 1986, mandatory retirement rules in most workplaces influenced retirement age for many workers (Rix, 2004). Federal policy increasing the age of eligibility for full Social Security benefits from age 65 to 67 by the year 2027 is creating an added incentive to delay the timing of retirement (Neumark, 2003).

## GENDER AND RACIAL INEQUALITIES IN RETIREMENT

When comparing men and women, financial security provided mainly through Social Security benefits creates the single largest gender difference in decision and timing of retirement (Flippen & Tienda, 2000; Ruhm, 1996). On average, retired women's pension benefits make up only about 60% of that of retired men (Belgrave & Bradsher, 1994). Women's likelihood of lower-paying employment tends to keep them from being entitled to adequate retirement pensions (Moen, 1996; O'Grady-LeShane, 1996). Thus, women's marital status influences their financial security in retirement and the decision and timing of the retirement. Furthermore, because of their assumption of family care obligations, women are more likely to have a discontinuous work history, which results in their lower financial security (Pienta, Burr, & Mutchler, 1994). Married women are more likely than single women to be able to retire early because their financial security in retirement tends to rely on their husbands' pension eligibility. Single women are likely to remain in the labor force longer than married women because the pension benefits they are entitled to are often inadequate as a result of their having had relatively low-paying jobs. This general tendency, however, may partly decline in the future because women of the early 21st century are less likely to have interrupted work histories than those in the past. Nevertheless, the gender gap in pay and access to employer pension coverage still persist (Szinovacz, 2003).

Racial minorities—African Americans and Hispanics in particular—have shown different retirement patterns than White men. African Americans tend to work in less secure jobs that often offer low pay, few benefits, and a high risk of disability (Taylor & Doverspike, 2003). Compared with White men, African American men have fewer options in the decision and timing of retirement mainly because of their higher disability rates and poorer health (Hogan & Perrucci, 1998). Also, when compared with the general population, a smaller proportion of African American workers report that their employers pay into a pension plan on their behalf (Employee Benefit Research Institute, 2003; Gallo, Bradley, Siegel, & Kasl, 2000). Both their public and private pension benefits tend to be lower. African Americans and Hispanics are much more likely than White males to experience involuntary labor market exit because of poor health and are likely to retire without sufficient financial security (Flippen & Tienda, 2000; Gibson, 1987). One study found that they are much less likely than retired White men to receive any form of retirement benefits and much more likely to receive disability benefits and public assistance (Hayward, Friedman, & Chen, 1996).

When compared with White women, African American women are more likely to have worked steadily most of their adult lives, but they retire later than their White counterparts, largely for economic reasons (Szinovacz, 2003). Greater probability of widowhood and lower wages result in more than half of African American

women ages 62 to 64 being in the labor force, compared with one-third of White women in that age span. Furthermore, retirement induced by labor market problems is much more common among African American women than among White women (Belgrave & Bradsher, 1994).

## SATISFACTION WITH RETIREMENT

Traditionally, a widely held belief in American society, particularly among men, was that full-time participation in the labor force was important to a sense that one was leading a full and meaningful life. This belief contributed to the view that retirement was likely to represent a personal crisis and have a number of adverse personal consequences (Atchley, 1993). Retirement, however, is not usually a negative event; retirement research from the late 1990s has identified the positive effects of retirement on life satisfaction and health, especially during the first year postretirement (Reitzes, Mutran, & Fernandez, 1998). Indeed, the majority of older adults in the 2002 Health and Retirement Study expressed high levels of satisfaction with retirement (61.5%), although others said they were only somewhat satisfied (32.9%), and some reported dissatisfaction (5.6%; Butrica et al., 2006).

Generally, there are four factors that strongly influence satisfaction with life in retirement: (a) financial security, (b) health, (c) preparation and planning for retirement, and (d) active engagement (Reitzes et al., 1998; Szinovacz, 2003). Not surprisingly, retirees with higher incomes, or at least adequate finances, report that they are more satisfied with their lives and develop a more positive identity as retirees than do those with lower incomes (Szinovacz, 2003).

Given the observed positive relations between health status and earned income, programs that improve health status during the working years may, in turn, increase earned income in retirement. Those who believe that they know more about their financial planning, including Social Security and health care coverage such as Medicare, are more likely to have prepared for retirement (Taylor & Doverspike, 2003). Conversely, those without definite retirement plans tend to find themselves bored or depressed (Ekerdt, Kosloski, & DeViney, 2000). Participating in productive activities at older ages is associated with better physical and mental health and lower mortality (Lum & Lightfoot, 2005). One study reported that 58% of volunteers said that an important reason for helping others was to render their own lives more satisfying. Activities other than work that provide autonomy, some sense of control, and the chance to learn new things are all related to retirement satisfaction (Szinovacz, 2003). Conversely, activities that involve less problem solving, are less complex, and are less fulfilling have all been associated with distress and depression in retirement (Ross & Drentea, 1998).

## PHASES OF RETIREMENT PROCESSES

Atchley (1993, 1996) has proposed a widely cited conceptual model illustrating the phases of the retirement process in six distinctive stages: (a) preretirement, (b) honeymoon, (c) disenchantment, (d) reorientation, (e) stability, and (f) the terminal phase. In the preretirement phase, becoming aware of retirement approaching, workers begin saving money, envision postretirement activities such as hobbies, and prepare for general changes to their social lives. The honeymoon phase comes immediately after the actual event of retirement. Retired people typically enjoy their free time during this phase by doing activities such as extended travel. This phase of retirement life requires disposable income, which is a problem for some older people. In the disenchantment phase, the retired person may begin to feel depressed about life and the lack of interesting things to do.

After the traveling, cleaning, and doing the things most desired, some retirees get tired and bored. Often retirees next go through a fourth phase referred to as reorientation in which they develop a more realistic attitude about how to deal with retirement. Retirees reevaluate their choice of activities and make decisions about what is most important. This phase involves using their life experiences to develop a realistic view of alternatives given their resources. Reorientation also involves exploring new avenues of involvement in an effort to create a set of realistic choices that establish a structure and a routine for living in retirement with at least a modicum of satisfaction. During the fifth phase, referred to as stability, the retired person establishes a new set of daily life routines and enjoys them. Typically, volunteer work, visiting, or some other routine is developed that keeps the retiree happy and feeling important.

The sixth and terminal phase of life in retirement is marked primarily by illness or disability that prevents the retiree from actively caring for himself or herself. Also, with increasing frequency the fifth stage sometimes ends because of reemployment. Because workers are retiring earlier than they used to, many are young and healthy enough to return to the labor force, thus terminating retirement, at least temporarily.

## THEORETICAL FRAMEWORKS OF RETIREMENT

Retirement research has made extensive use of the following four distinctive theoretical frameworks to account for postretirement well-being in society: (a) disengagement theory, (b) activity theory, (c) continuity theory, and (d)

the life course perspective. Disengagement theory focuses primarily on the smooth functioning of a society rather than on individual adjustment or attitudes. This theory suggests that as individuals age it is both necessary and positive for them to disengage from society. Early approaches focused on the loss of the work role occasioned by retirement and suggested that this loss would undermine individuals' identities and lead to their social withdrawal (Cumming & Henry, 1961).

Activity theory (which dates from the 1950s) argues that it is not retirement per se but involvement in fulfilling or alienating activities that influences well-being. This theory indicates that retirement leads to a loss of sense of control, mainly because of a reduction in problem-solving activities. Retirees, however, do not report more distress than full-time workers (Ross & Drentea, 1998). Continuity theory emphasizes the importance of maintaining focal identities over life transitions such as retirement. Thus, pronounced lifestyle changes following retirement, as well as experiences of simultaneous life events that lead to disruption in salient identities, are likely to reduce well-being. Atchley (1993, 1996) argued that there is considerable continuity in identity and self-concept over the retirement transition and that this continuity contributes to retirement adaptation. That retirement does not necessarily constitute an identity crisis is upheld by accumulating evidence showing that, on average, retirees are satisfied with their lives (Elder & Johnson, 2003).

A more recent and nuanced view of retirement adaptation derives from the life course perspective and its integration with selected assumptions from other theories. The life course perspective draws attention to four concepts that seem crucial to understanding postretirement well-being: (a) contextual embeddedness of life transitions, (b) interdependence of life spheres, (c) timing of life transitions, and (d) trajectories and pathways (Dannerfer & Uhlenberg, 1999; Setterstein, 2003).

Contextual embeddedness of life transitions refers to the experiences under which the transition occurs, including selected attributes, current and past statuses and roles, as well as societal context. It is also assumed that life spheres are interdependent, so that experiences in one sphere (e.g., employment) influence and are influenced by experiences in other spheres (e.g., family). Furthermore, the experience of life transitions is contingent on their timing in terms of cultural prescriptions, personal expectations, and occurrences in other life spheres. The notion of trajectories and pathways points to the historical context of life experiences (historical time), their development over time (trajectories), and the interrelationships among diverse life transitions (pathways).

## FUTURE RESEARCH DIRECTIONS

The 21st century has found many Americans, particularly baby boomers, ill prepared for retirement (Moody, 2006). Because of changes in the age of eligibility for Social Security benefits, workers born after 1960 will not eligible for the full benefit until age 67. Of workers 55 and older, however, about 44% believe that they will be eligible for full Social Security benefits 1 to 4 years before they actually will be. One-half of workers 55 and older have less than $50,000 saved for retirement (Employee Benefit Research Institute, 2006).

In response to the aging of the population and the workforce, policy makers in the United States, along with those of most other industrialized nations, have been seeking ways to reduce the anticipated fiscal burden of the growing number of retirees on the public resources, younger populations, and the national economies. Part of the public effort is, as in the cases of the United Kingdom and Sweden, to privatize exiting public old-age pension programs by introducing individual accounts (OECD, 2005). Another way to deal with the growing number of older people is to look for ways to postpone retirement for older workers. In years ahead, facilitating efforts by employers to retain older workers longer than they currently do is expected to be the subject of much research (DeLong, 2004). The older workers of the early 21st century are healthier, better educated, and more highly skilled than those in any previous times (Rix, 2004). They should be able to work longer, but will they?

The ever-changing diverse pathways into retirement is another promising research topic. It would also be of use to address and untangle the patterns and trends in retirement being driven by changes in the national and global economy (Hardy, 2006).

Another direction for future retirement research is the effort to come to a clearer understanding of the biological, psychological, and social aspects of aging, which are likely to influence the retirement behaviors of current and future older workers. Much research has been done to identify a variety of age-related changes in physical functioning, but further research is needed on specifically how these age-related biological changes connect to job requirements in different types of occupations (Szinovacz, 2003).

Retirement research has paid considerable attention to the role of public and private pensions in retirement behaviors and satisfaction, but little research has been done on workplace flexibility. This line of research is expected to lead to a greater variety of partial retirement options and more supportive work environments for current and future older workers (Shepard, Clifton, & Kruse, 1996).

Researchers also need to put more effort into figuring out what types of employment training and education and workplace designs will increase the number of workers who elect to work well beyond their mid-60s. Finally, there is a need for research on how and why selected policies influence (or fail to influence) workers' retirement decisions. Social scientists know very little about the diversity of work patterns in later life or about how aging affects work performance in various work settings (Van Dalen & Henkens, 2002). Some jobs provide opportunities for personal growth and creative expression; other jobs subject workers to physical strain, emotional stress, and hazardous conditions. Careful study of workplace interventions is needed to facilitate efforts to make work less stressful for older workers, to increase work satisfaction, to reconfigure jobs, and to understand how technology is changing the workplace.

**SEE ALSO** Volume 2: *Careers; Policy, Employment; Employment, Adulthood; Job Change;* Volume 3: *Pensions; Social Security; Theories of Aging.*

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## RETIREMENT COMMUNITIES

The U.S. Census Bureau projects that the U.S. older adult population aged 65 years and older will more than double from 34.9 million in the year 2000 to 71.4 million in the year 2040. Partially because of this, retirement

communities and other elder-friendly housing is expected to grow in numbers also. While only about 5% of the U.S. older adult population currently lives in planned retirement communities, the industry is growing steadily. Broadly defined, retirement communities are housing facilities for older adults that offer at least minimal services for the residents. Often these communities have minimum age requirements for admittance.

While older adults are typically classified as one group, their individual needs and physical abilities vary greatly. Even within a single individual, needs change from decade to decade as an individual ages. Young retirees may be fit and active compared to the oldest adults who may labor with life's daily tasks. These changing needs can be a struggle within traditional living contexts. Different types of retirement communities are available to serve older adults' changing physical and emotional needs. Some types of retirement communities seek to ease the physical and life changes accompanying the aging process by providing services and programs, such as transportation and health services. Others provide recreational activities for retirees. Some retirement communities go a step further and cater their services or programs to specific subgroups. For example, retirement community options for gay, lesbian, bisexual, and transgender (GLBT) older persons are becoming increasingly available for the approximately 4 million of them who will be reaching retirement age by the year 2030. GLBT retirement communities provide services and support to individuals who might otherwise avoid seeking needed care in a traditional venue for fear of prejudicial treatment.

The United States has a great variety of retirement communities. There are currently six planned retirement community types. These include retirement new towns, retirement villages, retirement subdivisions, congregate housing, continuing care retirement communities (CCRCs), and university-linked retirement communities. The six planned retirement community types can be categorized broadly as either service-oriented or recreation-oriented communities. An additional broad retirement community category exists: unplanned retirement communities, commonly called naturally occurring retirement communities (NORCs). Because a substantial number of older adults reside in NORCs, they warrant mentioning despite being unplanned communities that generally do not provide supportive services for their older adult residents.

NORCs are fully age-integrated housing facilities with at least half of their residents aged 60 or older. The term *naturally occurring retirement community* was coined in 1985 by Michael Hunt, a researcher and professor at the University of Wisconsin-Madison. Because NORCs are not designed as retirement communities, the facilities may lack accessible design elements, such as grab bars and no-step entries, and supportive services. Often these communities evolve by hosting long-term residents aging-in-place in addition to others who moved there upon retirement because of market forces. In the early 1990s, it was established that over one quarter (27%) of the U.S. elderly resided in NORCs. This number is expected to continue to grow.

Service-oriented communities include congregate housing, CCRCs, and university-linked retirement communities. These differ from recreation-oriented communities in their offerings, in their target markets, and market areas. Target markets are demographic groups that facilities attempt to attract. Generally, service-oriented communities appeal to those over age 75. This market is predominantly women and those who need or recognize the need for functional assistance in the future. The geographic region from which residents are drawn is much smaller than for recreation-oriented communities. For service-oriented communities, new residents often come from within 15 miles of their previous homes. The exception to this rule is in the southeastern United States where residents may come from much further away.

Recreation-oriented communities consist of retirement new towns, retirement villages, and retirement subdivisions. These have target markets of older adults who are often younger than 75 years of age. These preretirees or young retirees are typically more active individuals who desire recreational activities and low- or no-maintenance living. This market usually consists of more couples, whereas unmarried persons (typically widows) make up the majority of residents in the service-oriented communities. Recreation-oriented communities attract residents from large regional and even national market areas.

**Retirement new towns** These towns originated in 1960 with the New Year's Day grand opening of Sun City, Arizona. This large-scale development opened the doors quite literally on the *active retirement* concept. Modern retirees were encouraged to reject stereotypical sedentary activities such as sitting on a park bench, and instead were offered numerous activities and an idyllic lifestyle.

Retirement new towns are most often found in Sunbelt and western states. While the lifestyle offered is focused on active leisure, these retirement communities supply both active and passive recreational activities. Active recreational options include sports such as golf, swimming, and tennis. Passive recreational choices might include crafts, games, and educational programs. Also, new towns have the most integrated and comprehensive retail, financial, and medical services.

New towns are privately developed. Largest in size among retirement communities, new town populations

***Senior Generation Gap.*** *Characterized Residents dine in the formal dining room at San Francisco Towers retirement community in San Francisco, CA. As residences designed for a generation that came of age during the Great Depression make way for one that entered adulthood amid postwar prosperity, more and more retirement communities are experiencing culture clashes. Often, squabbles arise when administrators propose raising monthly fees to pay for the spa cuisine, wellness classes and computer–ready apartments demanded by comparatively spry 70-year-olds.* AP IMAGES.

range from 5,000 to 46,000 residents, as found in Arizona's Sun City, which is the world's largest retirement development. Other examples of retirement new towns include Sun City Center near Tampa, Florida, and Leisure World in Laguna Hills, California.

**Retirement villages** Such villages are smaller, with fewer services than new towns. These privately developed retirement communities typically have from 1,000 to 5,000 residents. More moderately-sized, these communities cannot support large-scale retail and service facilities. While some incorporate these services to some extent, the level they are included varies. Often, services are conveniently located nearby in the host community.

Both passive and active recreational opportunities are widely available to residents. These might include shuffleboard, performances, and classes. Retirement village residents are predominately retired couples in their late 60s. While more common in Sunbelt states, they can be found in northern climates also. Some examples of retirement villages are Leisure Village West in Ocean County, New Jersey, and Leisure Village in Camarillo, California.

**Retirement subdivisions** These subdivisions attract residents with the lifestyle available in the host community or the area's appealing climate. Commonly, these developments are located in urban Sunbelt areas. This housing type relies on the surrounding community for services and amenities. Because retirement subdivisions offer fewer services and amenities themselves, they are often less expensive than new towns or retirement villages.

Generally small or medium-sized, retirement subdivisions are planned by for-profit developers. The types of housing in these subdivisions can vary from conventional single-family homes to mobile homes. Often, residents in these developments are healthy, married couples in their early 70s. Some examples of retirement subdivisions are Orange Gardens in Kissimmee, Florida, and Riviera Mobile Home Park in Scottsdale, Arizona.

**Congregate housing** Definitions vary for this type of housing. Frequently, congregate housing consists of independent living apartments with some supportive services provided. Because these facilities' residents tend to be older elderly individuals, independent living can be prolonged with the help of supportive services, such as meal, shopping, and housekeeping services. Congregate housing residents tend to be widowed women aged 75 and older. While a variety of supportive services are available, personal care services are usually not; this is the main difference distinguishing congregate housing from assisted living facilities, which offer extensive help with

daily living tasks. Though passive recreational activities may be available, congregate housing does not usually offer active recreational activities.

Traditionally, congregate housing has been developed by government, religious, or fraternal agencies. More recently, private for-profit organizations entered the congregate housing market. These for-profit developments are higher priced than nonprofit developments. The least expensive variety is government subsidized developments. Congregate housing examples include the Hyatt Hotel's subsidiary Classic Residence, which can be found in Maryland, Texas, New Jersey, and California.

**Continuing care retirement communities** CCRCs are senior living facilities minimally offering three care levels: active (or independent) living, assisted living, and nursing home care. In addition to these three levels of care, commonly called the continuum of care, CCRCs offer a wide selection of social and recreational activities and health care services. Often these social and recreational activities include shows, classes, and outings. While these facilities offer abundant passive recreational activities, active recreational activities are nonexistent or limited, perhaps including only low-intensity exercise classes. Also, CCRCs offer many other on-site amenities such as coffee shops, grocery stores, and beauty shops.

The health care aspect is what distinguishes CCRCs from other retirement community options. In addition to housing specifically geared for assisted living or nursing care, residential care options are becoming increasingly available. This program allows staff to provide health and personal care services to independent living residents in their apartments. Such services enable frail residents the option to age-in-place rather than moving into assisted living. CCRC residents are commonly older, in their mid-80s.

Among CCRCs, there are two versions: life-care communities and life-care look-alikes. Life-care communities guarantee residents nursing care should the need arise. Life-care look-alikes only guarantee a priority spot on nursing bed waiting lists. Traditionally, CCRCs were developed by nonprofit groups, but recently for-profit agencies such as Marriott Corporation have entered the market. Nonprofit options tend to be less expensive than for-profit options. Examples of CCRCs include Maple Knoll Village in Springdale, Ohio, and Oakwood Village Retirement Communities in Madison, Wisconsin.

**University-linked retirement communities** Such communities are a relatively new concept. As of 2008, more than 60 college campuses throughout the United States offer this retirement community option. Some university-linked retirement communities are loosely tied to their universities, whereas others have stronger, mutually enriching associations. The more integrated retirement communities offer residents university services such as the opportunity to attend classes, or the opportunity to utilize university health services and, when available, the university-linked hospital facility. The university is enhanced through older adult residents mentoring, volunteering, guest lecturing, and other forms of direct involvement. Students benefit from the employment, internship, volunteer, and research opportunities these retirement communities provide. Rather than focusing on entertainment, university-linked retirement communities provide opportunities for personal growth. Arguably, this can be seen as a more meaningful way to spend retirement time.

University-linked retirement communities come in three types depending on the level of integration with the university affiliate. In the first type, the affiliated university is not involved in the development or operation of the retirement community. The university's role is to provide social and academic programs for the residents. In the second type, the university provides support, usually providing land or financing, to the retirement community in addition to programming. In the third type, the university is fully linked with the retirement community. The university owns, supervises, and runs the retirement community. Also, the university provides the social and academic programs and activities. Campus-affiliated retirement communities include the University of Michigan in Ann Arbor and the University of Florida in Gainesville.

Retirement communities are anticipated to grow in number in the future. These communities are a constantly evolving residential and lifestyle option for older adults. As a group, the baby boomer generation entering later life has greater wealth and higher education than preceding cohorts of older adults. Research shows educated older adults are more likely to enroll in educational programs upon retirement. As a result, university-linked retirement communities, despite their newness, are anticipated to be an increasingly attractive option for retirees. Also, more specialized retirement communities, such as those for GLBT persons, are anticipated to grow in number.

Like the rest of the world, the United States is expecting tremendous growth in its older adult population. Even though older adults often are classified into a single category, there is much variation within that category. Equally, much variety is needed in living arrangements to appeal to this large and dynamic group. This implies both opportunities for growth in all service-oriented and recreation-oriented retirement community types.

**SEE ALSO** Volume 3: *Assisted Living Facilities; Neighborhood Context, Later Life; Residential Mobility, Later Life.*


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***Nichole M. Campbell***

# RILEY, MATILDA WHITE
### *1911–2004*

Matilda White was born in Boston on April 19, but spent most of her childhood and adolescence in Maine. While attending high school she met a fellow student, Jack Riley, who became her childhood sweetheart and lifelong partner. Riley received a bachelor's degree from Radcliffe College in 1931 and married Jack Riley that summer. They later had two children. Riley received a doctorate of science from Bowdoin College in 1972. Matilda and Jack Riley's professional collaboration began in the 1930s and continued throughout their marriage. Jack Riley died in 2002, months before their 71st wedding anniversary. Matilda White Riley died in Maine on November 14.

Matilda White Riley was one of the most influential figures in the establishment of the sociology of aging and the life course. In her long career she comprehensively reviewed and synthesized the state of the science, made seminal scholarly contributions, and designed and directed the primary source of funding for aging research in the social and behavioral sciences.

Riley's career was punctuated by a number of firsts. In 1939 Riley and her father established the Market Research Company of America, pioneering the use of sophisticated sampling and survey techniques to understand and predict consumer behavior. From 1949 to 1960 Riley served as the first executive director of the American Sociological Association. In 1979 she became the first associate director for social and behavioral research at the newly established National Institute on Aging (NIA) at the National Institutes of Health (NIH). For the next 20 years Riley directed the social and behavioral grants programs at NIA and worked with the other NIH institutes to incorporate social and behavioral research. From 1973 to 1981 she also served on the faculty at Bowdoin College in Maine; she was the first woman to achieve the rank of full professor there.

Riley's scholarly legacy is based largely on three enduring theories of age, the life course, and social structure. During the early 1970s Riley directed a state-of-the-science review and synthesis of social factors and aging. After reviewing what was known, Riley developed age stratification theory (Riley, Johnson, & Foner, 1972). She argued that age is a basis of stratification, functionally equivalent to other forms of stratification, such as socioeconomic status, race and ethnicity, and gender. The defining characteristics of stratification systems are that the strata can be arranged hierarchically in terms of their social value and that rewards and responsibilities are allocated differentially across strata. Riley argued that old age is the least valued age stratum and that older adults are allocated fewer rewards (e.g., financial support, public esteem, valued social roles) than are those in other age strata. Although historical conditions change and old age may no longer be at the bottom of the age stratification hierarchy, the enduring truth of age stratification theory lies in the recognition that age is more than a personal characteristic; it is a fundamental element of social structure.

Riley's second important contribution was the concept of structural lag, which refers to the ongoing mismatch between the characteristics and needs of societal members and the structural arrangements of a society (Riley, Kahn, & Foner, 1994). Riley posited that social, cultural, and historical changes occur—and, most important, alter people's lives—more quickly than social structure can be modified to meet the needs generated by those changes. For example, structural arrangements for day care for children lagged decades behind the massive entry of mothers into the labor force. Because personal well-being is highly dependent on structural supports, structural lag makes the life course more difficult than it would be otherwise.

Although both age stratification theory and structural lag implicitly apply to people of all ages, Riley's third important contribution focuses explicitly on the life course. She noted that most people assume that they will have a life course in which major tasks are sequenced by age or life stage. Thus, people assume that the proper "order" of life is to complete one's education, work and raise a family, and then retire for a period of sustained leisure. Riley argued that this age-segregated life course creates unnecessary strains for individuals and harms society by precluding social contributions by people in certain age groups, especially older adults. Riley advocated an alternative, age-integrated life course in which education, productive activity, and leisure are pursued in tandem throughout the life course (Riley & Riley, 2000). Transformation of the life course to achieve age integration cannot occur unless the structural arrangements of society are changed drastically; this would include everything from changes in age-based laws and programs to the shift to a labor force dominated by part-time workers.

Matilda White Riley's life served as an illustration of a personal and professional journey at odds with social conditions. Her scholarly legacy has led to a greater understanding of the intersection of social structure and personal biography.

**SEE ALSO** Volume 3: *Foner, Anne; Theories of Aging.*

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***Linda K. George***

# ROSSI, ALICE S.

***1922–***

Alice Schaerr Rossi, the sociologist and educator, was one of the early analysts of the role of women in modern American society, and an esteemed researcher of life course issues. An activist as well as a scholar, in 1966 she became one of the founders of the National Organization for Women, and an organizer of Sociologists for Women in Society, becoming its first president. She was elected president of the American Sociological Association in 1982 (and was its third woman president). Rossi's political and feminist roles were formative in the development of her scholarly attention to sex and gender in all domains of life, with shifts in theoretical paradigms informing each next generation of research over a 40-year period.

Born in 1922 in New York City, Rossi received a BA at Brooklyn College of the City University of New York in 1947. She earned a PhD in sociology in 1957 at Columbia University on the basis of her dissertation "Generational Differences in the Soviet Union." In this work, she compared Russians reared before the revolution and those after the revolution, in terms of their life course history and its consequences.

Rossi attributes some of her initial interest on certain life course perspectives to her association with Bernice Neugarten (b. 1916), whom Rossi met when she was a research associate in the Committee on Human Development at the University of Chicago (1964–1967). Neugarten's work on aging inspired Rossi to develop a research agenda exploring different stages of parenting. Rossi's work, reported in "Transition to Parenthood" in the *Journal of Marriage and the Family* (1968), had considerable influence in the field of family sociology. It viewed family roles in terms of stages including the "honeymoon" stage (marriage to first birth), early parenting, late parenting, and post-parenting, with insights about changes in different life stages. This was reprinted in 14 anthologies and was widely cited by others scholars, thus becoming a *citation classic* in 1986. Her book *Gender and the Life Course* (1985) also made her a major figure in life course analysis.

Her interests in the intersections of social and biological factors were developed through participation in a MacArthur Foundation supported research network on midlife development, spanning the years between 1989 and 1999. In the period following the research she and other network members produced hundreds of journal articles, and a final summary volume in 2003. She edited a book, *Sexuality across the Life Course* (1994), with commissioned articles on topics across the life course and a 70 page introductory chapter on a biosocial

***Alice Rossi.*** *NOW founder Alice Rossi speaks at a podium.* NATIONAL ORGANIZATION FOR WOMEN, INC.

perspective on the life course (blending biological and physiological variables with psychological, sociological, or historical variables). She did a major review of research and theory on the menopausal transition and analyzed menstrual and menopausal symptoms that respondents had reported in a national survey the MacArthur network launched in 1995. This became an important chapter in the study's summary volume, *How Healthy Are We? A National Study of Well-being at Midlife* (2003). Another study Alice Rossi did, with her husband and colleague Peter Rossi (1921–2006), gave major attention to changes due to aging and changes associated with birth cohort differences and was reported in *Of Human Bonding: Parent-Child Relations across the Life Course* (1990).

A cluster of Alice Rossi's scholarly work informed and was informed by her political activities. Her service on former U.S. president Jimmy Carter's (b. 1924) Commission on International Women's Year in 1977 led to a panel study of how participation in the Houston Conference had an impact on women delegates' political aspirations, which she reported in *Feminists in Politics* (1982). Her political concerns for abortion law reform in the 1950s through the 1970s led to her designing questions for national surveys about conditions of public approval for legalizing abortion. These survey questions were used in numerous public opinion polls over a 30-year period. Her earlier publications include the path-breaking analyses of social restrictions on women's access to male-dominated occupations. Among these writings were *Women in Science: Why So Few?* (1965), *Barriers to the Career Choice of Engineering, Medicine, or Science among American Women* (1965), and *Equality between the Sexes: An Immodest Proposal* (1964), a study of the social barriers women face. She also edited a widely used anthology titled *The Feminist Papers* (1973), a collection of feminist articles through history.

As of 2008 Rossi is a professor emerita at the University of Massachusetts where she was Harriet Martineau Professor of Sociology from 1974 to 1991. Prior to that she was professor and chair of the Department of Sociology and Anthropology at Goucher College (1969–1971), a research associate at the Department of Social Relations at Johns Hopkins University (1967–1969), and a research associate (or associate professor) at the University of Chicago (1964–1967). She also held other research posts at Harvard University, the National Opinion Research Center, and Cornell University.

She is the recipient of numerous awards and honorary degrees, and was elected a fellow of the American Academy of Arts and Sciences in 1986. She also served as president of the Eastern Sociological Society in 1973. Alice and Peter Rossi, who died in 2006, were married in 1951. They had two daughters and a son.

**SEE ALSO** Volume 2: *Menopause; Parent-Child Relationships, Adulthood;* Volume 3: *Sexuality, Later Life.*

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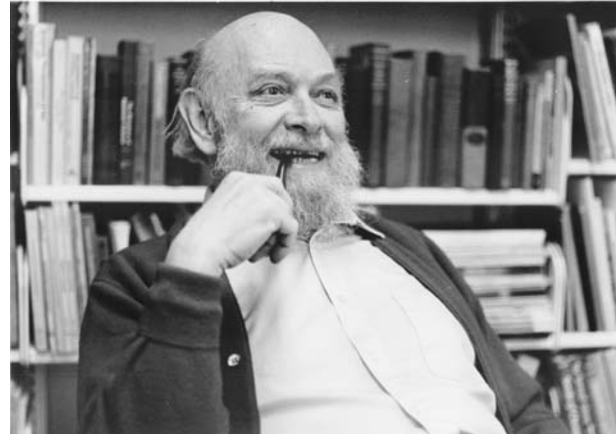
***Cynthia Fuchs Epstein***

## RYDER, NORMAN B.

***1923–***

Norman Burston Ryder is a Canadian-born demographer and sociologist who spent most of his career in the United States. His work is so firmly grounded in a life-course perspective that his methods and modes of thought have influenced analysis of all parts of the age spectrum. His work is notable for its use of birth cohorts in the analysis of social change, for its insistence on the processional nature of decision making, and for its focus on the population aggregate as a determinant and consequence of behavior throughout the life course.



***Norman Ryder.*** OFFICE OF POPULATION RESEARCH, PRINCETON UNIVERSITY.

Ryder was born in Hamilton, Ontario. He received his bachelor of arts degree from McMaster University in 1944 and a master of arts degree in economics from the University of Toronto in 1946. Studying on a Milbank Memorial Fund Fellowship at Princeton University, he received another master's degree in economics in 1949 and a doctorate in sociology in 1951. His dissertation, *The Cohort Approach: Essays in the Measurement of Temporal Variations in Demographic Research*, was published in 1980 by Arno Press as part of a series of important dissertations in the social sciences. After graduation, Ryder returned to Canada to work for the Dominion Bureau of Statistics in Ottawa and to hold a faculty position at the University of Toronto. A few years later he returned to the United States. After a brief stay at the Scripps Foundation for Research in Population Problems in Oxford, Ohio, working on the design for the first Growth of American Families survey, he moved in 1956 to the University of Wisconsin. In 1971 he returned to Princeton University and the Office of Population Research, where he remained until his retirement in 1989. Ryder was president of the Population Association of America in 1972–73 (Petersen & Petersen, 1985; van der Tak, 1991).

Ryder is perhaps most widely known for his use of cohorts in the analysis of social change (Ryder, 1965). A cohort is a group of people experiencing a given event in the same period. For example, a birth cohort is the group of people born in the same year, and a marriage cohort is the group of people marrying in the same year. Ryder was not the first demographer to use cohorts in demographic analysis (Whelpton, 1949). He generalized the idea, however, using it to analyze mortality as well as fertility in his dissertation (Ryder, 1980). In that same work he also

investigated marriage cohorts as well as birth cohorts and conducted the analysis by parity status of the woman, *parity* being the medical term for the number of babies a woman has birthed.

In a widely cited paper, "The Cohort as a Concept in the Study of Social Change" (1965), Ryder connected the notion of cohorts with the less technical but more widely used concept of a generation and discussed the demographic use of cohorts in the context of a generation as defined by sociologist Karl Mannheim (1952) and historian José Ortega y Gasset (1933). Thus, an established life course of transitions at customary ages may be disrupted by period events such as wars, depressions, or inventions. Such a disruption, occurring to birth cohorts at various ages, may cause the birth cohort to modify their subsequent life course in differing ways. Ryder's observations on cohorts set off a continuing project that tries to statistically separate the effects of age, period, and cohorts on a dependent variable (Mason & Fienberg, 1985; Yang, Fu, & Land, 2004).

The greater part of Ryder's career was spent on the analysis of fertility decisions. In this work he was always alert to the Markovian nature of life—that is, what has happened before, whether intentional or not, conditions the decisions one makes subsequently. Ryder's first published paper, one in which he invents parity progression ratios—that is, birth probabilities conditional on parity—makes exactly that point (Stolnitz & Ryder, 1949). The bulk of Ryder's work on fertility analyzes decision making using surveys, especially the several National Fertility Surveys (Ryder & Westoff, 1971; Westoff & Ryder, 1977a). Attention to careful measurement of both dependent and independent variables has always been a hallmark of Ryder's work. The measurement of contraceptive use, whether a given birth was wanted, and the intention to have a subsequent birth were all important themes in his research (Ryder 1973, 1976; Westoff & Ryder, 1977b).

Finally, Ryder has always been alert to issues of aggregation in demographic studies. His classic paper "Notes on the Concept of a Population" (1964a) takes very seriously the reality of the population as more than a simple aggregation of its elements. In this paper, individuals are nested in birth cohorts and cohorts are nested in populations. In a subsequent paper (1964b), he details how rates at one level translate into rates at another. His sense of the interdependence of these levels extends to the policy arena. His "Two Cheers for ZPG" (1972) argues that insisting on zero population growth now and henceforth would lead to fertility booms and busts that would continue for a very long time.

Ryder's career has been that of a gifted technical demographer and a wide-ranging sociologist with a clear eye on what is important.

**SEE ALSO** Volume 2: *Mannheim, Karl;* Volume 3: *Age, Period, Cohort Effects; Cohort.*

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***Hal Winsborough***

# S

## SECOND DEMOGRAPHIC TRANSITION

**SEE** Volume 3: *Demographic Transition Theories.*

## SELF

The term *self* has been applied in many ways by philosophers, sociologists, and psychologists. Sociologists tend to use the term *identity* whereas psychologists use the term *self*, but this disciplinary distinction is blurred (Howard, 2000). Theorists in both disciplines focus on different aspects of the self in their research and theories. In one study, for example, two psychologists (Leary and Tangney, 2003) explored whether the term *self* was used in a consistent fashion in entries in a computerized database of published psychological studies (PsycInfo). The researchers found more than 66 different applications, including many hyphenated terms used to denote diverse facets and processes related to the self (e.g., self-esteem, self-monitoring). Following this review, Leary and Tangney concluded that the term *self* is best used as an organizing construct to integrate theory and research on the personal characteristics and descriptions, subjective experiences and beliefs, personal life stories, and typical behaviors (projects, goals, interests, life routines) of an individual.

Sociologists traditionally consider the social and relational roots of the self and identity over the life course (Howard, 2000; Rosenberg, 1981). According to sociological perspectives, the self is shaped by interactions with cultural, historical, and social systems of influence (e.g., family, school, occupation, religion). As individuals progress through the life course, they are assigned to and actively adopt different roles within these systems. Such roles might include daughter, student, worker, mother, parent, friend, voter, caregiver, or senior citizen. Each of these roles carries social expectations regarding appropriate behavior and beliefs for role holders. Individuals adopt these *social expectations* as their own beliefs and aspirations, and compare themselves with others in similar social roles and groups (i.e., *reference groups*). In turn, members of the social groups give feedback to the individual about their status. Sociologists view transitions in work and family roles, physical appearance, social age categories, and participation in society as sources of change in the self.

By contrast, psychologists consider the dynamic intersection between the inborn or personal characteristics of individuals and their social contexts. They focus on underlying cognitive, emotional, and motivational processes associated with adapting to personal aging and changing roles and life circumstances. According to psychological theory, individuals actively select their social contexts and significant others (such as peers, siblings, or spouse) and evaluate their interactions with these significant others (*reflected appraisal*). In addition, individuals remember their earlier life experiences and construct their own autobiography. In addition to *social comparison* (that is, comparing one's self with others, as a way to evaluate one's own abilities and attributes), individuals also make *temporal comparisons* with their personal past experience and their personal hopes and fears about the future (*possible selves*). These different but complementary

approaches contribute to a variety of research on the self during adulthood.

This entry primarily focuses on research on the self in midlife and old age. It focuses on two central areas of investigation, the *self-concept* and *possible selves*, and reviews findings about the content, structure, and functions of these constructs and whether these facets change over time. Before moving to these two topics, we briefly review the multiple components and dimensions of the self, to provide background to subsequent material.

## THE MULTIPLE DIMENSIONS OF THE SELF

Scholars have long conceptualized the self as a system that involves many components and levels. The psychologist William James (1890) is credited as being the first to distinguish between the *self-as-knower* (the "I," or subject) and the *self-as-known* (the "me," an object of reflection). The self-as-knower encompasses all of the processes involved in monitoring and being aware of our momentary relationship with the environment and our location in space. This aspect of the self also underlies our experiences of emotion, pain, hunger, and bodily sensations and the impression that we can somehow control or direct our feelings and thoughts.

In contrast, the self-as-known refers specifically to people's knowledge and general beliefs about themselves. Individuals describe, interpret, evaluate, and construct their self as an "object." The self-as-known may be kept private or disclosed to others. It is protected from threat, enhanced, and adjusts to changes in social context, personal relationships, and personal needs. The self-as-known thus includes one's sense of identity and perceived social roles, personal knowledge of one's own life, and autobiographical memories, as well as personal theories, beliefs, goals, and life narratives.

Although the distinction made by James almost a century ago was widely adopted by theorists, until recently most research focused on the known rather than the knowing self. However, contemporary cognitive and social neuroscientists interested in investigating aspects of consciousness, self-monitoring, empathy and the ability to synchronize with the actions of others are revitalizing research on the self-as-knower (e.g., Harmon-Jones and Winkielman, 2007).

In contemporary research on the known self, the terms *self-concept* and *identity* are frequently used synonymously to refer to sub-components of the self. Early theories of adulthood and aging sometimes used the terms *self* and *personality* interchangeably. There is a growing consensus, however, that *personality* can be considered a separate component of the self (e.g., Hooker and McAdams, 2003). Adult personality is often described in terms of a profile of five core dispositions or traits (extraversion, neuroticism, conscientiousness, agreeableness, openness to new experience; e.g., Pervin and John, 1999). Self-related knowledge, beliefs, and processes are distinguished from personality traits; the potential amount of self-relevant information stored in memory is large and varied. Furthermore, whereas individual differences in the core personality traits appear to have a substantial biogenetic basis and to be relatively persistent across the lifespan, differences in self-related knowledge, beliefs, and processes are based more on cultural, historical, and social influences and thus are more susceptible to change during the course of an individual's life.

## SELF-CONCEPT

According to James, the *self-concept* is integral to the definition of self-as-known. Researchers have used the term in both a narrow and a broad way, however (Demo, 1992). Narrow definitions focus on the thematic content of self-descriptions and identification with social groups and social roles. Broad definitions also include self-evaluations (e.g., self-esteem), general beliefs about personal competence and ability to achieve goals and perform social roles (self-efficacy, agency), and the memories and stories of one's own life.

Theories about the nature of the self-concept and how it might change in adulthood and old age originate in the fields of sociology and psychology. Theorists who adopt a broad definition make proposals about changes in content, organization, and function. Sociological frameworks typically address issues related to the social construction of identity and the influence of social roles (e.g., Howard, 2000; Stryker, 2007). Sociologists, in particular, consider differences associated with structural or sociodemographic characteristics such as gender, race, socioeconomic, and age. In comparison, psychologists have focused primarily on self-related processes. They ask whether these processes change during adulthood and examine the consequences of individual differences in self-concept for health, well-being, and longevity.

For example, some psychologists believe that older adults are motivated to maximize positive emotions and minimize negative experiences and that this is observed in their specific selection of social partners (Carstensen, 1993). Older adults prefer to reduce their social networks in order to spend more time with people with whom they feel close. Young adults, in contrast, are motivated to obtain information about the world and to expand their social contacts in order to do this regardless of potential emotional costs. Sociologists, on the other hand, might interpret the reduction in size of the social network as a response to changed roles within society and social expectations, such as retirement or widowhood.

## THEMATIC CONTENT IN MIDLIFE AND OLD AGE

Self-descriptions given in response to questions such as "Tell me something about yourself; Who are you?" contain the important characteristics of self-related knowledge that an individual considers uniquely distinguish him- or herself from others (Markus and Nurius, 1986). Self-descriptions may communicate to a listener an overall picture of an individual's identity, behavior, goals, values, interests, and personal characteristics (Epstein, 1990; McAdams, 2006).

In old age, themes or specific descriptions that were relatively unimportant in young and middle adulthood gain in salience or importance to the individual (Breytspraak, 1984). Erik Erikson (1959), for example, proposed that midlife and old age is characterized by the developmental tasks of generativity (versus self-absorption) and integrity (versus despair). He suggested that these tasks are manifested in reflections about the past, one's legacy, contributions to others, and thoughts about death. Others have added three themes to this description: (a) loss of professional status, (b) coping with physical decline, and (c) the process of dying. Some theorists suggest that the reorganization of personal life narratives and self-descriptions is the major task of midlife. Others argue that post-retirement and the period of young old age is another period of change due to a decrease in professional and family roles and obligations. After age 70, there is increased room for new self-definitions in such domains as hobbies and personal interests. In advanced old age if individuals face increasing physical declines that put constraints on pursuing hobbies and interests, self-descriptions are often characterized by a life review and reflections about having lived a long life. Thus, the self-descriptions of very old persons may rely on experiences, achievements, and events that happened in the past rather than in the present or the future.

The family represents another important theme in older persons' self-descriptions. Laura Carstensen's socioemotional selectivity theory (Carstensen, 1993) suggests that people are increasingly selective with regard to their social partners when approaching the end of life. Whereas social partners become less important for gaining information as one ages, emotion regulation becomes an increasingly important motive for social contact. Family members and relatives, usually long-standing members of one's social convoy (Antonucci, 1990), might have heightened emotional importance in old age as the number of same-aged friends decrease due to their health-related problems, reduced mobility, or because they have died. Family stories about relationships and changes in relationships are central to the self.

Empirical research is equivocal as to whether self-descriptions change with age. Few if any studies have examined the same individuals longitudinally from early in adulthood into old age. Most research asks if people in different age groups differ, but this cross-sectional design confounds age with cohort effects. That is, it is not possible for researchers to discern whether the changes observed reflect age differences (e.g., maturation processes) or one's membership in a specific birth cohort (e.g., baby boomer versus member of "greatest generation"). The content of the self-concept (i.e., attitudes, beliefs) of an older person reflects influential social forces when they were younger, together with new themes that that emerge with age. It is not possible to disentangle these two aspects in cross-sectional studies. Lifespan researchers generally reserve the term *change* to reports of longitudinal evidence and otherwise refer to *age-related differences* for cross-sectional studies.

McCrae and Costa (1988) found age-related differences in the self-definition of persons between 32 and 84 years of age: With increasing age, themes such as age, health, life events, life situations, hobbies/interests, and attitudes were mentioned more frequently, whereas family roles, social relationships, neuroticism, personality traits, and daily living routines were mentioned less frequently. George and Okun (1985), however, found no significant age-related differences in their cross-sectional comparison of the content of the self-definitions of three age groups (45–54, 55–64, and over 65 years). Likewise, Filipp and Klauer (1986) reported no age differences in a cross-sectional comparison of five male cohorts (born between 1905 and 1945). A longitudinal analysis of the changes in self-definitions over 26 months, however, showed that the themes, social roles, political or religious attitudes, body image, and social style were increasingly reported to be self-defining, while emotionality and autonomy were mentioned less frequently.

Charles and Pasupathi (2003) examined variability in the self-descriptions of adults aged 18 to 94 over the course of a week and asked whether this situational variability was associated with daily mood. Older women showed less day-to-day variability than younger women, especially when they reported being together with the same people. There were no age-related differences between young and older men, and overall, men varied less from day-to-day. Greater variability in self-descriptions was related to more frequent and more intense experience of negative affect. This is one of the few studies of the ways that day-to-day context shapes self-descriptions. The findings point to the value of this methodology as a way to examine the construction of life stories and the self-concept, particularly during periods of the life course associated with transitions in roles and change in family, work, and health contexts.

Freund and Smith (1999) examined the spontaneous self-descriptions of old and very old persons in the context of the Berlin Aging Study (BASE), a heterogeneous sample of old (70–84 years) and very old (85–103 years) adults in Berlin, Germany. Participants included a broad spectrum of themes in their descriptions, but health, personal characteristics and activities, and aspects of life review dominated. The majority of the sample considered current hobbies and interests, social participation, and daily living routines as self-defining domains. There were more similarities than differences between the old (70–84 years) and the very old (85–103 years) in the content of the self-descriptions. As is to be expected, very old participants generally did not mention outdoor activities that require good health and physical mobility, but instead discussed their health. Participants over 85 years also mentioned themes about family/relatives and interpersonal style less frequently than the younger age group (70–84 years).

Although family was one of the most salient themes, the very old persons (85–100+ yrs) referred to it less frequently. One possible explanation of this finding is that extremely close social partners, such as a husband or wife, might be highly integrated into one's self in very old age. This integration of close family members into one's self might take place to such a degree that they are perceived as part of oneself rather than "external" social partners who deserve a special mention. Widowed, divorced, and single older adults, however, did mention other social partners not belonging to their family (i.e., friends, acquaintances) more frequently than married persons. Not being married in old age might make relationships with other social partners more important.

These descriptive analyses of the content of the self-descriptions offer insights into the age-specific topics and challenges that face midlife and older adults. The analyses of life narratives collected using more open-ended methods provide additional insight into themes, including outcomes of life review, explanations for personal transitions, perceived "second chances" in life, and stories of personal redemption (e.g., Birren and Schroots, 2006; McAdams, 2006). Comparison of life narratives over time also offers a window on the process of constructing and reorganizing the self-concept. Birren and Schroots (2006), for example, suggest that the process of life review late in life is particularly important for the integration of self-knowledge. Life review may be a means by which individuals are able to face the inevitable aspects of physical dependency in very old age with pride and dignity.

## AGE IDENTITY AND PERCEPTIONS OF AGING

One theme of particular interest to lifespan developmental psychologists and life course sociologists is the individual's perception and evaluation of their own aging process. Sociological theory views physical appearance as a cue to social categorization (e.g., gender, race, age). Although there is much research on gender and racial identity, until recently there has been relatively little about the effects of physical aging on age identity and change in self-concept. Some research, however, considers stereotypes about physical attractiveness and physical appearance in old age and individuals' perceptions about the personal meaning of "getting older."

*Subjective age* is a multidimensional construct that indicates how old a person feels and into which age group a person categorizes him or herself (e.g., Settersten and Mayer, 1997). After early adulthood, most people say that they feel younger than their chronological age and the gap between subjective age and actual age generally increases as one ages. On average, for example, 90-year-olds in relatively good health report feeling between 12 and 20 years younger (Baltes and Smith, 2003). Age identity has several distinctive features. Unlike many other social categories (e.g., race, gender), all middle-aged and older adults were previously members of the categories child, adolescent, and young adult. As people get older, their knowledge and expectations about the characteristics of members in the category of seniors or older adults may or may not be renewed. Whereas some aspects of age identity may be positively valued (e.g., acquiring seniority in a profession or becoming a grandparent) others may be less valued depending on societal context. Perceived physical age (i.e., the age one looks in a mirror) is one aspect that requires considerable self-related adaptation in social and cultural contexts that value young bodies. In contemporary western society, older women more frequently describe inconsistencies between their subjective age and the image of their body reflected in a mirror than do older men.

Asking people how satisfied they are with their own aging captures an evaluative component of age identity. A large survey on the perceptions of aging in Americans over the age of 65 found that 87% were satisfied with life in general, yet considerably fewer people (64%) reported that getting older was better than they had expected, and 46% indicated that they felt old and tired. Feeling younger and being satisfied with one's own aging are expressions of *positive self-perceptions of aging*. They reflect age identity and the operation of self-related processes that enhance well-being. Psychologists suggest that positive self-perceptions of aging might sustain levels of social activity and engagement, enhance self-esteem and well-being, and boost bio-physiological functioning. Levy (2003) found that older individuals who are able to adapt to and accept changes in their appearance and physical capacity in a positive way evidenced higher well-being, better health, and longer life spans.

## EVALUATION AND STRUCTURE OF THE SELF

Two aspects of the self are considered essential for positive well-being and for maintaining a sense of overall personal continuity and cohesion. The first is the extent to which individuals consider their own attributes and life stories to be good or bad (positive or negative), and the second is the level of multifacetedness or differentiation of the self-concept.

Obviously, whether or not individuals believe that they have positive qualities is very important for their general sense of self-worth and emotional well-being (Epstein, 1990; Swann, Rentfrow, and Guinn, 2003). The majority of individuals in all age and cohort groups report a global sense of positive self-esteem (cf., Bengtson, Reedy, and Gordon, 1985; Crocker, 2004). Indeed, feeling worthless as a person over an extended time is a sign of pathological change, especially depressive illness.

*Multifacetedness* refers to the number of self-defining themes in an individual's self-concept and the richness and depth of information in these themes. Several researchers argue that having a multifaceted self-concept means that an individual has multiple alternatives available to them to compensate for potential loss (e.g., Leary and Tangney, 2003). For example, if a person indicates that helping others is an important feature of their self-concept but mentions only one example ("I often volunteer at my club"), this self-defining theme might be vulnerable if going to the club becomes impossible due to declining physical health. If, however, the theme "helping others," apart from active volunteer work, contains additional aspects such as helping the neighbor, giving advice, organizing the volunteer efforts of others from home, or helping family members, then the theme can be maintained in the self-concept. Similar to proposals about multifacetedness, some scholars suggest that the self becomes more integrated and that this integration involves increases in cognitive and emotional complexity (Diehl, Hastings, and Stanton, 2001).

Using cross-sectional data from the Berlin Aging Study, Freund and Smith (1999) found that multifaceted self-descriptions guarded against late-life depression, but did not bolster positive emotional well-being if the older person was physically frail. One interpretation of this finding is that multifacetedness might also be associated with the compartmentalization of the self-concept (e.g., Showers and Zeigler-Hill, 2003; see also Diehl, et al., 2001). For example, with increasing age, those themes and aspects that were previously highly salient to the self, but for some reason became obsolete, are not deleted entirely but rather separated from current themes. Over time, this process of compartmentalizing personal themes and aspects of self-knowledge could have both positive and negative effects on well-being. If the personal value placed on the category of past themes outweighs the perceived importance of present themes, then despite a general sense of life satisfaction, very old individuals will nevertheless experience a sense of personal loss. They are no longer the person that they were. The challenge of maintaining a positive view of life in very old age is daunting (Baltes and Smith, 2003).

## PROCESSES THAT SUPPORT, ENHANCE, AND PROTECT THE SELF

Many processes associated with enhancing, supporting, and protecting the self are proposed in the sociological and psychological literature. These processes include:

1. maintaining self esteem by carefully selecting activities and social partners that verify one's sense of mastery and competence;
2. avoiding contexts that threaten self-esteem;
3. comparing interests and performance with social peers;
4. regulating mood and emotional experiences to maximize positive and minimize negative feelings;
5. engaging in satisfying personal projects;
6. and working on personal goals that are compatible with one's self-concept (Leary and Tangney, 2003).

Research suggests that although all of these processes are present throughout adulthood, there are often subtle changes associated with increasing age (e.g., Brandtstädter and Lerner, 1999). The projects, goals, and hobbies that individuals pursue are reorganized and new priorities are established throughout the life course. The diagnosis of a chronic illness, for example, often contributes to new priorities and new goals. Such goals might range from giving up smoking, exercising more, or reducing work stress to focus on family life. In addition, people adjust the standards that they strive to achieve to accommodate changes in their physical capacity. Levels of aspiration thus tend to decrease with age. Instead of striving to run a marathon in three and a half hours, for example, the goal is to be capable of jogging a few miles three times per week and to avoid injury.

Strategies of comparison (social and temporal) used to evaluate oneself may also change with age in order to protect the self. Rather than compare one's self with people who are better off (i.e., upward comparison), older adults instead prefer to make downward comparisons with those who are not doing as well as themselves. This strategy can serve to bolster a sense of well-being in many contexts. For

example, even though a person might be in the hospital, there may be fellow patients who are not seen as recovering as quickly as oneself. Some older adults who complain that they see themselves as being slower at doing math or reading than they remember from their earlier years, nevertheless gain comfort by comparing their own ability to some of their peers with mild dementia.

The strategies used to cope with difficulties also tend to become more emotion-focused than problem-focused with age. Individuals find ways to cope that prioritize emotional well-being over finding a concrete solution to the problem. This is similar to the proposals of Carstensen's socioemotional selectivity model (1993; Carstensen, Isaacowitz, and Charles, 1999). Cross-sectional studies show that older adults focus on emotionally meaningful goals (such as contact with others close to them), whereas young adults are more likely to pursue goals that expand their horizons or generate new social contacts. Carstensen and colleagues suggest that these changes in preferences are linked to perceived time left in life. Because future time is inevitably limited in old age, young and older adults are motivated to select different goals.

## POSSIBLE SELVES

Possible selves are highly personalized, hoped-for and feared images of the self that function as incentives for action (Markus and Herzog, 1991). As temporal extensions of the self-concept, they guide decisions about what goals to work on, where to invest time and effort, what to avoid or resist, and what to abandon. Possible selves also reflect an individual's motivation to try to control the direction of her or his future life: motivations such as self-improvement, self-maintenance, and efforts to minimize loss and maximize well-being (Baltes and Carstensen, 1991; Cross and Markus, 1991; Hooker, 1999; Markus and Herzog, 1991; Ryff, 1991). People change and recalibrate their possible selves in response to changes in life circumstances, specific life events (e.g., widowhood, diagnosis of illness), and social expectations.

Although most research on possible selves, as conceptualized by Markus and colleagues, has been undertaken with college students and adolescents, this aspect of the self-concept in old age has received some attention because it offers an important window on the adaptive capacity and motivational system of older individuals (Dunkel and Kerpelman, 2006; Hooker and McAdams, 2003). Theories about the aging self suggest differences in the *number*, *content*, and *dynamics* of possible selves between the middle-aged, young old, and oldest old (e. g., Markus and Herzog, 1991). Lifespan psychologists suggest that, for the majority of the oldest old, declining health and losses in life quality are inevitable and that this places strong constraints on achieving new goals (Baltes and Smith, 2003). Life course sociologists point to the social expectations associated with transitions and life events in midlife and old age. These transitions heighten awareness of personal constraints (e.g., health, financial) and the closeness of one's own death. This influences the types of personal goals and projects selected and the temporal extension of these goals (e.g., Carstensen, Isaacowitz, and Charles, 1999). The awareness of a limit to the personal time left to live is reflected in the overall temporal focus of the self-concept and this is reflected in an individual's possible selves.

**The Content of Possible Selves in Old Age** Whereas concerns about the social, interpersonal, and occupational self are prominent domains in the future scenarios of young and middle-aged adults, in later life the domain of health becomes more salient (Hooker, 1992; 1999). Cross and Markus (1991), however, reported that while the fears of 60-year-olds were about health and lifestyle constraints (e.g., becoming physically dependent), their hoped-for selves were about personal characteristics. Similarly, in interviews with men and women aged over 85 years, Troll and Skaff (1997) found that perceived changes in personality characteristics (and especially positive changes) were mentioned more often than changes in physical health, everyday competence, and lifestyle. Other researchers suggest that strivings for satisfying interpersonal relationships are important in old age (e.g., Antonucci, 1990; Carstensen, et al., 1999).

Smith and Freund (2002) examined data from the Berlin Aging Study and found that the possible selves of adults aged 70 to 103 years were highly personalized and varied. Contrary to suggestions that late adulthood is a period of disengagement from making future plans in favor of life review, participants in BASE generated varied future scenarios that covered a range of domains. Possible selves associated with personal characteristics, health, and social relationships predominated. The majority of participants had at least one matched possible self (i.e., a hope-for and a feared scenario for the same theme).

Hopes and fears about health and personal characteristics were mentioned more than ones about family and social relationships. Furthermore, participants ages 80 years and older reported fewer hopes related to their social relationships, compared to the 70–79 year olds. In current self-descriptions, Freund and Smith (1999) found that BASE participants frequently mentioned their activities and interests. In the possible selves scenarios of the same participants, however, this domain was less prominent and was rarely mentioned as a feared self. Given the realistic constraints associated with declines in health, activities and interests may be things that people are prepared to abandon (or to leave out of their

future-self images) because they can gain esteem from memories of past acts and present achievements. Although concerns about cognitive functioning (memory, dementia) are often thought to occupy the minds of older adults, this domain was mentioned rarely in the future-self images of BASE participants.

Research on subgroups of older adults with specific illnesses, such as Alzheimer's disease (Cotrell and Hooker, 2005) and Parkinson's disease (Frazier, Cotrell, and Hooker, 2003), suggests that health-related changes in objective life circumstances play a significant role in the content and functioning of possible selves. While the central late-life task of dealing with declining health represented a focal domain in the possible selves of the majority of participants in these studies, a wide range of other domains also are evident, especially those associated with identity (personal characteristics) and attachment (social relationships, positive contacts with family and friends). Hoped-for selves were not just expressions about avoiding undesirable outcomes or maintaining the current status: Expressions of desires to experience something new or experience something again predominated. As in younger age groups, the possible selves of many individuals also showed a degree of motivation for change.

**The Dynamics of Possible Selves** Possible selves are a dynamic part of the self concept in very old age. Several theorists (e.g., Hooker, 1999; Markus and Herzog, 1991) propose that possible selves are acquired, maintained, transformed, and given up over time. In longitudinal studies, researchers find evidence of both stability and change in the profile of domains included in possible of selves over time. Whereas individuals' concerns about long-term projects associated with family well-being or health maintenance may be stable over time, their specific hopes and fears about short-term issues may change considerably. Changes in health status and life circumstances play a role in giving up possible selves linked to activities and interests and those older adults who lose social partners may reduce their hopes and fears about social relationships. Over time, older individuals may also be less motivated to strive for maintenance and instead focus managing their losses.

A further aspect relates to the extent to which the structure of possible selves in old age changes over time. Is there, for instance, a trend toward more integrated or compartmentalized possible selves? A trend toward a highly integrated (dedifferentiated) structure might involve the addition or maintenance of matched hopes and fears over time or a restriction of matched possible selves to highly salient late-life domains like health. A trend toward compartmentalization (differentiation), in contrast, might involve the addition or maintenance of more fears than hopes or the increased domination of possible selves by fears.

Smith and Freund (2002) examined the dynamics of the possible selves of participants in the Berlin Aging Study over four years. They found that some images were stable while others were added and deleted over time. The large majority of BASE participants showed some aspects of change in their future possible selves. New hopes and fears were added; other aspects were lost over time. They also observed changes in the extent to which hopes and fears within a domain were matched, and a progression toward adding matches in the domain of health.

Theory suggests that hoped-for possible selves organize and energize the adoption of behaviors (Cross and Markus, 1991; Hooker, 1992; Hooker and Kaus, 1992; Whaley, 2003). This reflects another aspect of the dynamics of possible selves. For example, individuals who want to be good grandparents might have a possible self in the domain of social relations that motivates them to think about different ways of participating in the lives of their grandchildren. This simulation may facilitate a decision to engage in relevant activities (e.g., babysitting) and fuel long hours of continued patience with energetic grandchildren. In contrast, researchers propose that feared possible selves disorganize behavior and cause inaction because they provide the individual with a vivid undesired image without necessarily specifying means and strategies of how to avoid it (Hooker, 1992).

Hoppmann, Gerstorf, Smith, and Klumb (2007) examined whether possible selves in three salient life domains (health, cognition, and social relationships) are associated with the performance of daily activities in those domains. Using time-sampling information from 83 participants of the Berlin Aging Study, they demonstrated that domain-specific possible selves translate into daily behavior and are related with concurrent affective experiences and subsequent mortality hazards in old and very old age. Hopes in the domains of health and social relations were positively associated with the performance of health-related and social activities. Although participants with health-related hopes reported lower overall levels of positive affect, in general the performance of possible self-related activities in daily life was associated with elevations in concurrent positive affect. Older adults who report hopes appear to have elaborate images of what to do in the service of their desired future selves and this helps them to actually perform domain-specific activities (Cross and Markus, 1991; Hooker, 1992; Whaley, 2003). In contrast, older adults who report feared possible selves may feel trapped by vivid images of undesired situations and lack the means and strategies to avoid them. In addition, older adults may perceive low

control over feared outcomes particularly in the domains of health and cognition (Hooker, 1992). This might apply less to the domain of social relations. Alternatively, older adults may successfully avoid situations that are related to their feared selves.

Hoppmann and colleagues found no association between hopes and daily activities in the cognitive domain. One reason for this finding might be that by the time individuals reach old age, they can draw on life-long experiences to help them decide how to stay in good health (e.g. physical activity, medical check-ups) and maintain satisfying relationships (e.g. calling friends, solving social conflicts), but have little experience with cognitive decline. For most persons, cognitive decline accumulates slowly over many decades and usually does not constrain everyday functioning unless pathological change also occurs. For this reason, possible selves about cognitive functioning in general may be less effectively implemented. Alternatively, many older adults may perceive little control over cognitive decline.

**The Function of Possible Selves** Psychologists typically consider the motivational and evaluative functions of possible selves in old age. For example, they ask whether possible selves a) indicate desires for self improvement (gain), self maintenance, or efforts to minimize or prevent losses; b) indicate the individual's preferences about what to approach and avoid in the future; and c) contribute to a positive sense of well-being (Cross and Markus, 1991; Markus and Herzog, 1991). Discrepancy-reducing theories of mood, for example, propose that engaging in activities that are instrumental in either minimizing the distance between an actual and a desired situation or maximizing the perceived distance from a feared scenario contributes to experiences of positive affect.

Some researchers suggest that whereas middle-aged adults focus on achieving hoped-for selves (e.g., acquiring material possessions), older adults are more concerned with ensuring predictability (i.e., maintenance) and preventing or avoiding feared selves such as illness and dependency. Markus and Ruvolo (1989) proposed that when a domain gains in personal salience, an individual develops countervailing hopes and fears in that domain. Hopes are linked to strategies outlining what to do to attain domain-specific goals and the matched fears offset or balance these hopes with images of what could happen if the desired states were not realized. Matched hopes and fears in a domain indicate a high level of motivational control in that domain and the availability of means and strategies for working on future goals (Markus and Ruvolo, 1989). Knowing in which domains older adults have hopes and fears and in which domains matched possible selves are constructed can therefore tell us much about the operation of the system.

Which characteristics (content and structure) of possible selves are linked to well-being in late life? Cross and Markus (1991) found that at all ages persons who reported low life satisfaction generated more hopes about personal characteristics (i.e., indicating a desire to change present self characteristics), compared with those high in life satisfaction who generated more hopes in the occupational, family, and health domains. Smith and Freund (2002) found that hopes were less related to well-being than were feared self images. Developing and maintaining balanced possible selves, particularly in old age, might also serve as a resource for well-being.

Older adults who prioritize health in their current and future self-descriptions may be vulnerable to losses in well-being. The maintenance of matched hopes and fears about health, for example, might reflect chronic worry and rumination rather than a motivational force. This interpretation is analogous to a report by Niedenthal, Setterlund, and Wherry (1992). They suggested that a large number of highly interrelated possible selves (matched hopes and fears can be viewed as a special case of interrelated possible selves) may have detrimental emotional consequences when individuals are confronted with negative events. Similarly, Showers and colleagues (2003) found that the compartmentalization of positive and negative self images (and especially an increased focus on positive images) in the context of stressful life changes minimized the impact of negative life events on well-being.

?A3B2 tlsb=0.01w?>A working self concept that includes future guides for bolstering self-esteem and a sense of past and present mastery is an important aspect of the self in later life. While individuals may gain esteem from past feats in some domains (e.g., skills, family), other aspects of the self require continuous input (I'm still a nice person and accepted by others). For most older adults, health becomes self-defining. Those individuals who suffer from debilitating illnesses or lack well-functioning support networks to assist them to cope with poor health are at risk. The dynamic interplay of possible self content in relation to new challenges associated with changes in life circumstances and the relationship between current self-descriptions and future scenarios remains to be investigated. Such studies will further a current understanding of the role of future-oriented motivational systems in the maintenance of identity and well-being in very old age.

SEE ALSO Volume 1: *Identity Development; Social Development;* Volume 2: *Agency; Personality;* Volume 3: *Age Identity.*

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***Jacqui Smith***

# SELF-RATED HEALTH

Survey respondents are often asked for a self-rating of their global or overall health by answering the single question, "How would you rate your health?" The usual response categories are: excellent, very good, good, fair, or poor. This simple question has been the focus of a large and still rapidly growing body of U.S. and international research on adult and old-age populations. Responses have been used to track the health of populations over time; to compare health levels of countries, regions, and population subgroups; to predict the later health, disability, and even mortality of individuals in populations; and to compare perceptions of health among cohorts with different life course experiences. They have thus had continuing relevance to the study of health by all of the three life course parameters of age, period, and cohort.

## CONCEPT AND MEASUREMENT

Epidemiological surveys whose purpose is to measure the health status of populations often begin with this subjective rating of overall health prior to asking a series of more specific and objective questions about the individual's medical history and current health status, including functional limitations, health service use, symptoms, and medications. In many other types of surveys, such as those concerned with employment, the economy, or political opinion, self-ratings of health may be included as the single measure of health status. It has become a familiar question that respondents find easy to answer. The wording of these survey items may vary quite a bit (Bjorner, Fayers, & Idler, 2005); one common variant includes a specific age comparison ("Compared to other people your age, how would you rate your health?"). Older persons generally rate their health better on average when directed to compare themselves to other elderly persons than they do when making simple global ratings; one study finds that among middle-aged and elderly Danes, cross-sectional and longitudinal global self-ratings of health decline with age, but that age-comparative self-ratings do so much less or not at all (Andersen, Christensen, & Frederiksen, 2007). Because the age-comparative question conceals potentially important differences by age, some researchers argue that the simple global question is to be preferred (Vuorisalmi, Lintonen, & Jylhä, 2006).

## RESEARCH FINDINGS

Self-ratings of health are frequently used to track changes in population health over time or to make international comparisons. For decades, the National Center for Health Statistics has included the self-rated health question in its surveys, such as the National Health Interview Survey (NHIS). Similarly, the World Health Organization's Study on Global Ageing and Adult Health uses self-ratings of health as a comparative indicator of population health.

Such ratings, not surprisingly, show a strong relationship to age. Figure 1 shows that the percent of NHIS respondents reporting fair or poor health is higher for each older age group, ranging in 2005 from under 5% for 18- to 24-year-olds to 35% for those 85 and over; self-ratings of health mirror the increasing prevalence of chronic disease and functional limitations with age. Figure 1 also shows a trend of decline in the proportion reporting fair or poor health among the population aged 45 to 84, with relative stability for those younger and older. There was an especially sharp improvement in self-reported health in the young elderly group, aged 65 to 74, in the period from 1982 to 1990, when the proportion went from more than one-third to just one-quarter

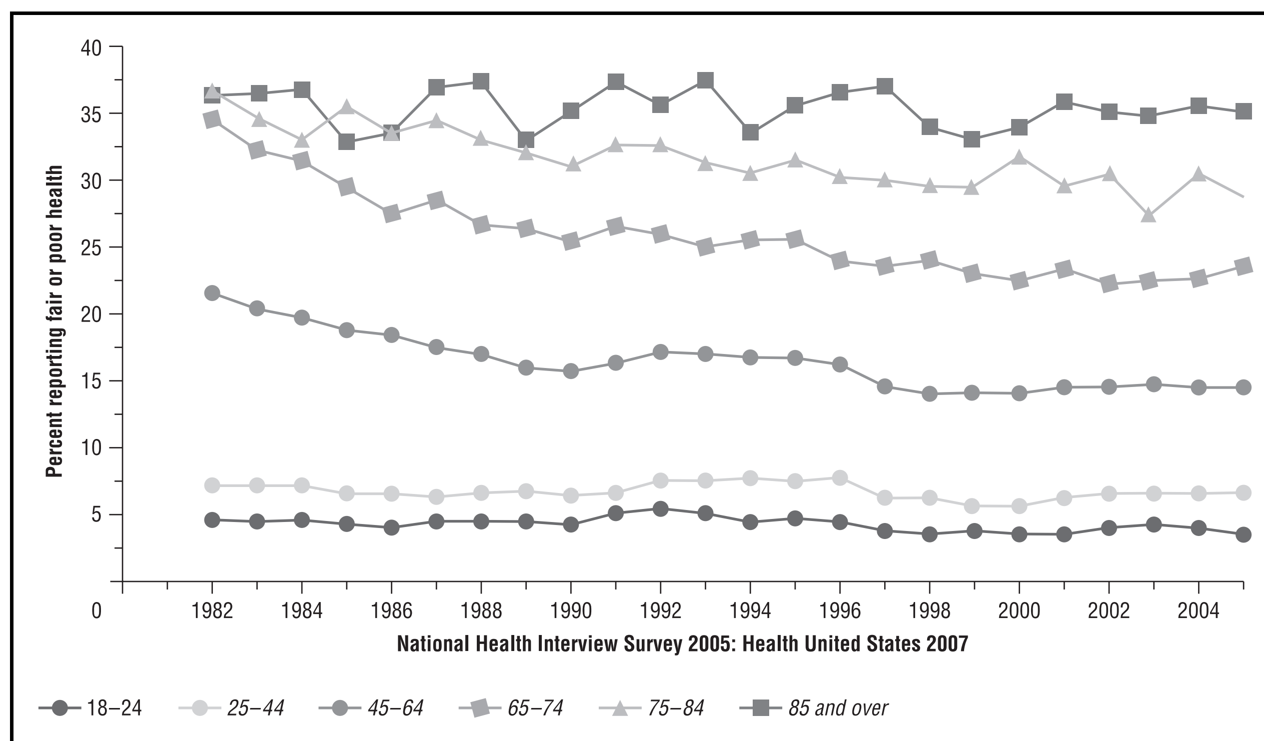


***Figure 1.*** *Respondent-assessed health by age: United States, 1982–2005.* CENGAGE LEARNING, GALE.

reporting less than good health. Self-ratings of health thus also mirror improvements in functional ability in the elderly during this period (Manton, Corder, & Stallard, 1997).

The objective health correlates of self-rated health are key to understanding what these subjective ratings are actually measuring. The Duke Longitudinal Studies of Normal Aging, begun in the 1950s, compared elderly respondents' global self-ratings to physicians' global ratings for the same individuals. While there was a significant amount of agreement between study participants and their physicians, indicating that participants and physicians were taking at least some of the same factors into account, analyses also found that that older individuals more often rated their health as better than the physicians did, a tendency that became more pronounced as people got older, and also that self-ratings were good predictors of future health (Maddox & Douglass, 1973).

In cross-sectional studies (or one-time, snapshot studies), self-rated health is associated with medical diagnoses, physical function, physical symptoms such as chest pain and breathlessness, musculoskeletal pain, and biomarkers such as albumin, total to HDL cholesterol ratio, hemoglobin, and creatinine (Bjorner et al., 2005; Jylhä, Volpato, & Guralnik, 2006). Self-ratings of health also are associated with psychosocial characteristics such as marital status (Joutsenniemi et al., 2006), social support (Cheng & Chan, 2006), poor socioeconomic status in childhood and adulthood (Hyde, Jakub, Melchior, Van Oort, & Weyers, 2006), and depression (Ruo et al., 2006). Self-ratings of health thus appear to reference a very wide range of experiential phenomena, from physiological states "under the skin," to emotional distress, the supportiveness of microlevel social relationships, and even the lifelong advantage or disadvantage of macrolevel social position.

In each of these associations, self-ratings of health reflect the expected direction of association; that is, illness or social disadvantage is associated with poorer ratings of health. The association of self-rated health with age, however, is more complicated. While cross-sectionally, as in Figure 1, poorer ratings of health are typical for older age, comparisons of self-ratings of health and actual physical health status among older and younger respondents reveal that older persons tend to rate their health relatively more positively, in comparison with younger persons at any given level of health status. This difference could arise because as people get older, they adjust to chronic illness over time and recalibrate what "health" means. Or it could be attributable to cohort differences deriving from the hardship or health disadvantage that many of the elderly persons of the early 21st century

experienced in early life. Or it could be attributable to the selective survival of those with better self-ratings of health—those with the poorest health having already died prior to old age, leaving the relatively healthy among the survivors. There is empirical support for all three explanations (Idler, 1993).

Such research tends to dispel the stereotype of hypochondriasis (that is, excessive preoccupation or worry about having a serious illness) among elderly persons; the older persons of the early 21st century are more likely to underemphasize health complaints than to overemphasize them. To the extent that there are cohort differences, however, these patterns may not hold for the future. A comparison of preboomers' and post–World War II baby boomers' self-ratings of health found, after adjusting for objective health status, that baby boomers reported poorer self-rated health and more rapid decline per year in self-rated health (Chen, Cohen, & Kasen, 2007), suggesting heightened expectations for health and functioning of the postwar cohorts, and that health optimism in old age may be less prevalent in the future.

Self-ratings of health are valuable simply as cross-sectional indicators of health status in populations, but their usefulness increased beginning in 1982 with a Canadian study that showed self-rated health to be a strong predictor of mortality over seven years in a large representative sample of elderly persons. Males and females who rated their health as poor were nearly three times as likely to die as those who rated their health as excellent, even when sociodemographic factors, Manitoba Health Services data on diagnoses, physician visits, and hospitalizations, and respondent self-reports of conditions were included in the analysis. Respondents who rated their health as fair and even good also had significantly higher risks of mortality compared with those who rated their health as excellent, even after adjustment for age, gender, and health status.

Since this initial publication there have been more than 100 such studies appearing in international public health, epidemiology, and social science journals in health, nearly all of which have had similar findings (Idler & Benyamini, 1997). A meta-analysis (that is, a report that systematically synthesizes the findings of prior studies) found significantly higher relative risks of mortality for those who reported good (1.23), fair (1.44), and poor (1.92) health, compared with those who reported excellent health (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006). In other words, persons with poor health were 1.92 times as likely to die during the study period, compared to those with excellent self-rated health. The continuing production of such studies is attributable to the frequency with which the self-rated health item is included in health surveys with longitudinal follow-up of mortality; these are by their nature secondary analyses of existing data with long follow-up periods. Many but not all of these studies have employed samples of older persons. Thus self-ratings of health have proven themselves to be both a useful indicator of the current health status of populations and valid predictors of mortality over follow-up periods as long as 12 or more years.

Population-based longitudinal studies have increasingly turned their attention to assessing how well self-ratings of health predict a range of health outcomes that logically precede mortality; researchers have studied a variety of other health end points including onset of coronary heart disease, withdrawal from the labor force, and functional disability (Bjorner et al., 2005), as well as the consequences of such end points for health services utilization and expenditures (DeSalvo, Fan, McDonell, & Fihn, 2005). At the same time, self-ratings of health are starting to be employed in smaller clinical research situations, such as emergency departments (Wong, Wong, & Caplan, 2007), for the purpose of predicting mortality, morbidity, and recovery and assessing quality of life outcomes in specific patient groups. A related area is the assessment of the quality of life of family caregivers who are coping with the needs of their cognitively or physically impaired elderly family members. An increasing body of research shows the health impact of caregiving and the need for assessments in which self-ratings of health of the caregivers themselves play a central role. It is likely that there will continue to be new applications and analyses of the concept of self-rated health as a single item, or embedded in multidimensional quality of life measurements, in representative population samples of elderly persons, in patient samples, and in caregiver samples.

## FUTURE RESEARCH

A number of innovative new approaches show promise for increasing understanding of the meaning and predictiveness of self-ratings of health. The turn to more clinically based research is advantageous because the objective health status of patient groups may be easier to determine and accurately adjust for, and because the implications for quality of life and the use and cost of health services are tangible. Population-based research, however, will continue to have the advantages of large sample sizes, long-term follow-up, and comparability with other studies. Several studies from the early 21st century show the importance of the concept of trajectories of self-rated health. P. Diehr and D. L. Patrick (2003) have proposed including death as a sixth (and worst) category when the outcome is self-rated health; an end point including the categories of excellent, very good, good, fair, poor, and

death would then account fully for all members of the sample and not produce misleading results because of attrition. G. A. Kaplan, P. T. Baltrus, and T. E. Raghunathan (2007) use a 30-year follow-up of an earlier study to construct self-rated health trajectories as sensitive indicators of health over the life course.

At the other extreme of follow-up periods, another study used a daily diary approach to understand the close relationship among symptoms, positive and negative affect, and self-ratings of health (Winter, Lawton, Langston, Ruckdeschel, and Sando, 2007). Given the development of new statistical techniques for the analysis of longitudinal data, and the availability of self-ratings of health in multiple waves of data, it is probable that future research in self-rated health will lean heavily on the concept of trajectories, both short term and long term.

Another individual-focused approach uses an experimental design for understanding the psychology of self-ratings. P.G. Williams, M. S. Wasserman, and A. J. Lotto (2003) used computer-based Stroop tasks to investigate the cognitive processing of self-ratings of health. Stroop tasks require participants to identify the color that is being used when a word printed in that color appears on a computer screen; the participant's ability to identify the color is impeded to a greater or lesser extent by the "distraction" that the meaning of the word presents, which delays attention to the color of the letters. The study showed that participants who rated their health as poor or fair took longer to identify the color of illness-related words compared with non-illness words and compared with participants with good health, showing that health-relevant information is processed differently by those who rate their health differently.

Finally, two other studies combine the advantages of the large, representative population-based study with the specificity of the patient samples. The Centers for Disease Control and Prevention (CDC) has used the Behavioral Risk Factor Surveillance System to track the self-rated health of diabetics in the United States; they find that fair or poor self-rated health is three times more likely among diabetics than among non-diabetics in the U.S. population, and that the prevalence of fair/poor health increased from 1996 to 2005 (CDC, 2006). A second paper tracking disease subgroups within populations used data from the Epidemiologic Follow-up Study to the National Health and Nutrition Examination Survey to identify diagnostic groups on the basis of both self-reported history and symptoms, and the standardized physician's examination and laboratory tests given to respondents (Idler, Leventhal, McLaughlin, and Leventhal, 2004). This study found that self-ratings of health were strong predictors of mortality in the circulatory disease diagnostic group, but did not predict mortality at all in a group with no diagnoses, even when age matched and health status was controlled; moreover, within the circulatory disease group there was a stronger effect for self-ratings among those who had experienced symptoms or had a history of the disease, in comparison with those who were diagnosed only on the day of the exam. These approaches suggest that more homogeneous, disease-based subgroups within large population samples may hold considerable promise for closer examination of risk factors and trajectories, particularly when the disease is chronic, potentially disabling, and requires daily management to avoid exacerbations and the costly use of emergency health care. As a group, these new directions in research, some at the individual level with a focus on the cognitive basis for self-ratings, and others at the population level describing the arc of these ratings over time, promise to keep interest in this simple variable high.

## CONCLUSION

Self-rated health is a widely used indicator of health status in cross-sectional population and clinical studies, as well as a significant predictor of mortality and other health outcomes in longitudinal studies. It is strongly associated with more objective measures of health status, such as functional limitations; diagnoses, especially of chronic conditions; and the use of health services, but it appears to incorporate additional information beyond these indicators, such as emotional distress, socioeconomic status, and social support. Self-ratings of health may represent a higher order of integration of all information available to the respondent, as well as their trajectory and perceived prognosis. Or it may represent a fundamental sense of health identity that underlies and colors new health events, influences the reporting of symptoms, and motivates health behaviors that result in measurable health outcomes. Given its brevity and its utility, it is likely to continue to stay in wide use in surveys and assessment instruments, which will in turn lead to further research.

**SEE ALSO** Volume 2: *Disability, Adulthood;* Volume 3: *Age, Period, Cohort Effects; Health Differentials/ Disparities, Later Life; Mental Health, Later Life.*

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***Ellen L. Idler***

## SENESCENCE

**SEE** Volume 3: *Aging.*

## SENSORY IMPAIRMENTS

Sensory impairments, specifically vision and hearing impairments, are among the most common chronic conditions in later life. Vision impairment affects between 9% and 18% and hearing loss affects between 24% and 33% of older adults. Older adults may also experience a concurrent loss of vision and hearing referred to as *dual sensory impairment*. Research has shown that between 5% and 21% of the older adult population has dual sensory impairment (Brennan, Horowitz, & Su, 2005). Sensory impairments are the major cause of activity limitations and disability in older adults. For instance, several studies have demonstrated that vision loss significantly predicts functional disability in older adults even after controlling for age, gender, and co-occurring health conditions (Horowitz, 1994). As the older adult population will be increasing over the next 30 years, so will the number of individuals who

experience sensory impairments and consequent disability in later adulthood.

## CAUSES OF SENSORY IMPAIRMENTS

Vision impairment or chronic vision loss among older adults occurs due to age-related eye diseases such as macular degeneration, cataracts, glaucoma, and diabetic retinopathy and can occur on a continuum ranging from minimal vision loss to complete blindness. Moderate and significant vision loss is termed *low vision* and is defined as a significant reduction of visual function that cannot be corrected to the normal range by ordinary eyeglasses, contact lenses, medical treatment, or surgery (Faye, 2000). A person with low vision may have severely reduced visual acuity or contrast sensitivity or a significantly obstructed field of vision.

Age-related hearing loss among older adults is called *presbycusis* and refers to the loss of auditory sensitivity with aging (Glass, 2000). The loss associated with presbycusis is usually greater for high-pitched sounds, but age-related hearing loss is also defined by general difficulty in understanding conversations especially when background noise is present. Causes of presbycusis are changes in the inner and middle ear or complex changes along the nerve pathways leading to the brain. As in the case of vision impairment, hearing loss generally occurs on a continuum ranging from mild hearing loss to profound hearing loss equaling deafness.

## THE ASSESSMENT OF SENSORY IMPAIRMENTS

For the purpose of the assessment of vision and hearing impairments, both clinical assessment methods and self-report measures are available. The clinical assessment of low vision, conducted by either an optometrist or ophthalmologist specializing in low vision, entails the assessment of visual acuity, contrast, and visual field through the use of vision charts and history taking. The clinical assessment of hearing loss entails an evaluation by an audiologist, who presents sounds in a sound-proof room and records the reaction to the sounds on a chart called an audiogram, which is a graphical representation of how well a certain person can perceive different sound frequencies. Based on the audiogram, the audiologist can determine the level of hearing loss.

In addition to these clinical measures, questionnaires that assess vision or hearing loss of varying degrees from the perspective of the patient have been developed. These self-report instruments determine the patients' functional status in the area of vision or hearing based on the amount of difficulty they experience in performing vision-related activities of daily living or the amount of difficulty they have processing auditory information. In the area of vision, the most widely used instruments include such validated measures as the Functional Vision Screening Questionnaire (Horowitz, 1996), The National Eye Institute Visual Functioning Questionnaire (Mangione et al., 2001), and the Veterans Affairs Low-Vision Visual Functioning Questionnaire (Stelmack et al., 2004). The following instruments are cited in the literature for the purpose of assessing hearing loss in older adults: the Hearing Handicap Inventory for the Elderly (Weinstein & Ventry, 1983), the Hearing Measurement Scale (Noble & Atherley, 1970), and the Communication Profile for the Hearing Impaired (Garstecki & Erler, 1999).

Clinical assessments and self-report instruments are used not only in the evaluation of older adults for the purpose of screening and providing appropriate interventions but also to assess sensory functioning for research purposes. However, in the case of both vision and hearing impairment, some population-based surveys such as the National Health Interview Survey conducted by the National Center for Health Statistics assess participants' vision and hearing loss through the use of single-item measures that are designed to assess vision and hearing impairment based on a specific definition of vision and hearing loss. For example, vision loss is defined as self-reported blindness in one or both eyes or other trouble seeing even when using glasses (Adams & Marano, 1995).

## RISK FACTORS FOR SENSORY IMPAIRMENTS

Research has identified several risk factors that are associated with the development of age-related eye diseases causing vision loss and the development of hearing loss. The first category of such factors can be described as environmental and behavioral risk factors. Hearing loss, for instance, can be caused by exposure to loud noise over long periods of time, smoking, a history of middle ear infections, and exposure to certain chemicals. In the case of vision loss, smoking and unprotected exposure to sunlight represent a risk factor in the etiology of both cataracts and macular degeneration. Moreover, individuals with diabetes are at risk not only for diabetic retinopathy (an eye disease that affects half of all individuals diagnosed with diabetes) but also for developing cataracts and glaucoma.

There are also several demographic factors that are associated with an increased occurrence or prevalence of vision and hearing loss. Hence, these factors are responsible for several demographic disparities in sensory impairments. As pointed out previously, the likelihood of experiencing a vision and/or hearing impairment significantly increases with age. Research consistently finds that increased age functions as a predictor of both vision

and hearing impairments (e.g., Horowitz, Brennan, & Reinhardt, 2005). In fact, among older adults about 17% of adults age 65 to 74 years and 26% of adults age 75 and older report some form of vision impairment, and persons 65 years and older are eight times more likely to have a hearing impairment than persons ages 18 to 34. The prevalence of hearing impairment has also been found to differ according to gender, with a higher number of older men experiencing hearing loss than older women. The poorer hearing in men can generally be attributed to greater levels of exposure to occupational and recreational noise compared to older women.

Studies of gender difference in the prevalence rates of vision loss have been less consistent; some studies have found a higher prevalence of vision impairment among women (Rodriguez et al., 2002) whereas others have not (e.g., Muñoz et al., 2000). A recent re-analyses of several population-based studies conducted by the Eye Disease Prevalence Research Group (2004), however, revealed that gender differences in prevalence rates varied according to ethnic groups. The prevalence rates for non-Hispanic White women were higher when compared to non-Hispanic White men. Yet this gender difference did not emerge in Hispanics and non-Hispanic Blacks. In contrast, hearing loss has been found to be most common in White men, followed by White women, Black men, and Black women (Helzner et al., 2005).

Other research has shown that overall African Americans are more likely to be visually impaired and more likely to have diabetic retinopathy and glaucoma when compared to Whites, who are more likely to have vision loss resulting from macular degeneration (E. G. West et al., 1997). There is also research that supports the high prevalence rates of vision impairment among Hispanic populations (Muñoz et al., 2002). In addition, overall Whites are more than twice as likely as Blacks and non-Hispanics are more than twice as likely as Hispanics to be hard of hearing (Holt, Hotto, & Cole, 1994). Moreover, there is evidence that lower education and income are associated with both higher rates of vision impairment and a higher prevalence of hearing loss. Finally, there is some evidence that hearing impairment is greater at all ages among individuals living in rural areas.

***Hearing Dog.*** *Sheri Abt walks Murphy near her home in Brainerd, MN. Abt, who suffers from a profound hearing loss, received Murphy two weeks before from Dogs for the Deaf, an international hearing dog training and placement organization based in Oregon.* AP IMAGES.

## LONG-TERM EFFECTS OF SENSORY IMPAIRMENTS

Research in the area of sensory impairments has also investigated the long-term effects of both vision and hearing impairment for older adults. Evidence shows that over time both vision and hearing impairment increasingly affect an older adult's functional ability and interaction with the physical and social environment. These sensory impairments individually or combined can lead to social isolation (e.g., Wahl & Oswald, 2000), cognitive decline, which is due to a reduced ability to participate in stimulating events (Peters, Potter, & Scholer, 1988), and decreased mobility as well as higher risk of falls and hip fracture (Campbell, Crews, Moriatry, Zack, & Blackman, 1999).

Moreover, consistent relationships have been documented between age-related sensory impairments and decreased emotional well-being, such as an increase in affective disorders, reduced feelings of self-worth and lower morale, and increased depression. There is strong evidence from a number of studies that approximately one-third of older adults who are visually impaired

experience clinically significant depressive symptoms (e.g., Horowitz, Reinhardt, & Kennedy, 2005) compared to between 8% and 16% of their nonvisually impaired counterparts (Blazer, 2003).

## THE FUTURE OF THE STUDY OF SENSORY IMPAIRMENTS

The experience of a vision and hearing impairment may not inevitably lead to the long-term consequences discussed previously, because services for the hearing impaired and vision rehabilitation services can prevent or alleviate many of the effects associated with these impairments. These services provide equipment and training to reduce the functional limitations associated with sensory impairments. Based on an assessment of the remaining visual function, services for people with vision loss may include the prescription of appropriate optical (e.g., magnifiers) and adaptive aids (e.g., special lighting). Services for people with hearing loss may entail the fitting of an appropriate hearing aid. People with vision loss can also receive instructions in skills of daily living and mobility skills. In addition, services for older adults may also include counseling with a mental health professional in an individual or group setting to help effectively cope with the emotional consequences of sensory impairments.

Some research evidence supports the effectiveness of such interventions for improved functional status and emotional well-being (e.g., Brody et al, 1999; Watson, De l'Aune, Stelmack, Long, & Maino, 1997). However, more research in the area of evaluations of the effectiveness of services for older adults with sensory impairments is needed, especially research employing controlled evaluation designs. Moreover, past research has demonstrated a lack of awareness of available services among older adults (see, e.g., The Lighthouse, 1995). However, very little is known about why this lack of awareness exists. Hence, future research needs to investigate not only the factors that may lead to a lack of awareness of available services but also the specific barriers that older adults of various socioeconomic backgrounds face when trying to access these important services. Also, more studies in the area of sensory impairments need to focus on the combined impact of concurrent sensory impairments (i.e., dual sensory impairments) and other comorbidities on the quality of life of older adults.

Finally, in the near future the research community working with and studying older adults with sensory impairments needs to be prepared to investigate the characteristics and needs of the cohort of aging baby boomers. The older adult cohort of baby boomers may be less likely to accept disability and dependency associated with disability as a normal part of aging than the present cohort of older adults. In the future, a change in perceptions by society may occur that in the present generally has internalized negative stereotypes about the helplessness of individuals with sensory impairments.

**SEE ALSO** Volume 3: *Assistive Technologies; Disability and Functional Limitation, Later Life.*

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***Verena R. Cimarolli***

# SEXUAL ACTIVITY, LATER LIFE

Research on sexual activity and sexual health in late life is in its infancy, but strong linkages are already emerging between the sexuality of older adults and other domains of life. For instance, mental and physical health are strongly associated with older adults' sexual activities and problems (Laumann, Das, & Waite, 2008; Lindau et al., 2007), as are socioeconomic status, marital status, the quality of intimate relationships (Laumann et al., 2008), and social connectedness (Cornwell & Laumann, 2008). These linkages point to the central role of sexuality, as both a cause and an indicator of overall wellness in later life and of healthy aging.

## THEORIZING SEXUALITY IN LATE LIFE

While sexuality among the elderly has not yet been adequately theorized, several conceptual frameworks for adult sexuality are helpful. Laumann, Gagnon, Michael, and Michaels (1994) develop an integrated model that emphasizes three sets of factors: (a) an individual's social network—both the sexual relationship itself and the broader web of "stakeholder" ties, such as those with friends and family, in which the relationship is embedded; (b) social norms or "scripts," which structure sexual patterns—such as culturally specific notions that sexual interest declines naturally with age (Waite, Laumann, Das, & Schumm, in press), or that masturbation lowers a man's virility (Das, Parish, & Laumann, 2007); and (c) individual choice, borrowed from economic choice theory, in which people draw on available resources and information to maximize "utility."

A second framework, guiding the Kinsey Institute's empirical studies, is the dual control model of sexual response (Bancroft & Janssen, 2000; Bancroft, Loftus, & Long, 2003). The model conceives of human sexual response as an adaptive mechanism, strongly responsive to a person's current life situation, and comprised of

cognition, central brain mechanisms including sexual arousal, and physiological processes such as erectile dysfunction in men and lubrication problems in women.

A third framework is the interactive biopsychosocial model of health (Lindau, Laumann, Levinson, & Waite, 2003). This model extends the conceptual framework proposed by Laumann et al. (1994) by integrating social influences with biological and psychological "capital" or endowments, with variation in each domain affecting the others. Sexual health is conceptualized as "jointly produced" by the interaction of an individual's capital endowments with those of his or her significant others.

## DATA ON SEXUALITY

Knowledge about sexuality in later life has been limited by a lack of nationally representative data sources. Most research to date focuses on clinical or community samples, such as the Massachusetts Male Aging Study, which do not represent the larger population of older adults. Clinical samples typically are comprised of persons already seeking medical and psychological care, whereas community samples are often limited to small geographic regions. Available cross-sectional studies include the 29-country Global Study of Sexual Attitudes and Behaviors, which obtained information on the prevalence and correlates of sexual problems among women and men aged 40 to 80 (Laumann et al., 2005; Nicolosi et al., 2004). The study used random sampling methods but suffered from low response rates. On average, roughly 19% of persons contacted ultimately completed the survey. The 1996 Swedish sex survey (Fugl-Meyer & Fugl-Meyer, 1999) and the 1992 and 1999 Finnish sex studies (Haavio-Mannila, Kontula, & Kuusi, 2001) included a range of sexual, social, and health-related questions. These surveys are nationally representative of all adult individuals in those nations, but included only small subsamples of older adults.

More recently, the 2005–2006 National Social Life, Health, and Aging Project (NSHAP) collected data on sexuality, health, social factors, and biological measures, among women and men aged 57 to 85 living in the United States (Lindau et al., 2007), and had a high response rate (75.5%). Many of the research findings discussed later in this entry are based on the NSHAP study.

## MEASURES

A key challenge facing researchers studying sexuality at any age is the relative lack of consensus on the specific behaviors and problems to examine. The 1992 National Health and Social Life Survey (NHSLS) defined sex as: "any mutually voluntary activity with another person that involves genital contact and sexual excitement or arousal ... even if intercourse or orgasm did not occur" (Laumann et al. 1994, p.67). This broad definition avoids equating sex solely with penile intercourse (which would exclude, for instance, sex between two women) and orgasm (because some sexual events may not culminate in orgasm for either partner). The NHSLS asked respondents about a wide range of sexual behaviors, including frequency of any sex and of vaginal sex, masturbation, and subjective responses to sex. Respondents were also asked about frequency of sexual thoughts, the subjective appeal of various sexual practices, and general attitudes about sexuality. Many of these items were replicated in the NSHAP, including the frequency of sex with a marital, cohabiting, or other partner; frequency of vaginal intercourse; condom use; and oral sex; as well as hugging, kissing, or other forms of intimate contact (Waite et al., in press).

There are divergent opinions on how to obtain information on sexual problems. One commonly used list of problems is based on the diagnostic categories identified in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (fourth edition, text revision, 2000 [*DSM–IV–TR*]). This list includes: (a) disorders of desire, such as low interest in sex and objections to having the genitals touched; (b) disorders of sexual arousal, including female sexual arousal problems (vaginal dryness, lubrication difficulties) and male erectile problems; (c) orgasmic disorders, such as inability to reach climax among both sexes and premature ejaculation among men; and (d) pain during sex. The World Health Organization's *International Statistical Classification of Diseases and Related Health Problems* (10th revision, 2nd edition, 2004 [*ICD–10*]) adds to this list lack of pleasure in sex (sexual anhedonia) and excessive sexual drive, that is, nymphomania or satyriasis.

Another controversial issue in measuring sexual problems is the length of time for which symptoms must be present for one to consider it a "dysfunction." In the study of Bancroft et al. (2003), only women sexually active in the preceding month were asked about their frequency of sexual activities and problems, because, the study authors argued, women would not be able to accurately recall experiences prior to that time. Rosen and Laumann (2003) counter, however, that focusing on such short time frames may not effectively differentiate between occasional versus chronic sexual problems. Both the NHSLS and NSHAP resolve this issue by asking about problems lasting "several months or more" over the past year.

A final measurement-related controversy involves the importance of the respondent's subjective distress as a component of a sexual dysfunction. Based on their

interpretation of the *ICD–10* and *DSM–IV–TR* definitions of dysfunction, and the recommendations of the first International Consensus Development Conference on Female Sexual Dysfunction (Boston, 1998), Basson et al. (2000, 2004) strongly recommend inclusion of a personal distress criterion in the definition. Bancroft et al. (2003), however, demonstrate that sexual difficulties are often correlated more with distress about the intimate relationship than about one's own sexual response. Such sexual difficulties, they argue, may thus represent adaptive psychosomatic responses to difficult situations. That is, these reactions may be sexual "problems" rather than medical "dysfunctions." Thus, measures not taking distress into account may result in overestimates of the prevalence of dysfunction. Finally, Rosen and Laumann (2003) note that, in contrast with sexual problems per se, measures of distress have yet to undergo rigorous psychometric tests. Based on these debates, the International Consultation on Erectile Dysfunction (Lue et al., 2004) recommended, for each dysfunction, a per se definition based on the presence (and degree) of a sexual problem, and a second definition including personal distress, to assess the impact of the dysfunction on the individual and his or her relationships.

## BASIC TRENDS

Basic trends in the sexual practices and health of older adults can be obtained from a comparison of reports of sexuality among 1992 NHSLS respondents aged 55 to 60 and 2005–2006 NSHAP respondents aged 57 to 64 and 75 to 85 (Laumann et al., 1994; Waite et al., in press). The oldest NHSLS respondents and the youngest NSHAP respondents are similar in age. First, the percentage who have a stable sexual partner is similar among the oldest NHSLS respondents (55 to 60) and the youngest NSHAP group (57 to 64)—ranging from 65% to 75% for women and 84% to 95% among men (reanalysis of NHSLS raw data; Waite et al., in press). Among the oldest NSHAP respondents (75 to 85), this decreases sharply to 40% among women, but more moderately to 78% among men—a gender difference probably attributable to women's greater chances of being widowed rather than married, a consequence of their greater longevity and the age difference between spouses. In contrast, for sex in the preceding year, while the proportion sexually active is similar (84%) for the oldest NHSLS and youngest NSHAP men, it drops sharply to 38% in the oldest NSHAP men. The same decline is apparent among women, from 59% to 62% among the younger groups to 17% in the oldest.

At all ages, sex usually takes the form of vaginal sex, exceeded in frequency, in the NSHAP sample, only by foreplay. Masturbation declines with age—among men from a high of between 48% and 63% (oldest NHSLS and youngest NSHAP group) to a low of only 28% (oldest NSHAP group), and among women from 22% and 32% to 16%. Among those reporting sex in the preceding year, NSHAP prevalences of oral sex are also lower than for vaginal sex, but decline with age only moderately among women (from 53% to 36%). Among NSHAP men, in contrast, oral sex prevalence starts out relatively higher (62%), but then declines sharply (to 28% among the oldest men). This suggests that neither masturbation nor oral sex serves as a replacement for intercourse among the elderly, because those in the oldest groups report the least partnered sex, the lowest level of masturbation, and—among those having any sex—the least oral sex. Note, however, that these changes in prevalence across age cohorts might be affected by changes in cohort preferences for these sexual practices, in addition to aging processes. For example, there is decided shift in the popularity of oral sex in the NHSLS when comparing the oldest age cohort (those born in the 1930s) with those born later (see Laumann et al., 1994, pp. 101–107). Such a shift might be attributable to society-wide changes in sexual mores regarding specific sexual practices.

Among those who reported any sexual activity in the previous year, at any age, women also tended to report more sexual problems than men. The only problems less common among women than men are climaxing too early and performance anxiety. Intriguingly, among NSHAP respondents who do have sex, there appears to be little increase in sexual problems with age—with the notable exceptions of erectile problems and inability to climax among men. These results suggest maintenance of sexual capacity with age rather than inevitable decline, at least among those who remain sexually active.

## FUTURE DIRECTIONS

Two important avenues to advancing knowledge of sexuality in later life have emerged in the early 21st century. First, efforts are underway to collect longitudinal data—or data that tracks individuals over multiple points in time. Most importantly, preliminary work has begun on a second wave of the NSHAP—the only study to link late-life sexuality with health, social factors, and other life dimensions. A second direction is the increasing incorporation of biomeasures in population-based surveys. Conceptual models such as the interactive biopsychosocial model (Lindau et al., 2003), described above, propose complex interactions between social and physiological correlates of sexuality. The NSHAP obtained levels of the three important sex hormones—testosterone, progesterone, and estradiol—along with a range of other physiological indicators, which should

prove useful in exploring the ways that physiological, social, emotional, and physical factors work together to affect sexuality at older ages, and *changes* in sexual functioning toward the end of life.

## CONCLUSION

Social science research has uncovered strong linkages between older individuals' sexual practices and problems and health, quality of life, and satisfaction with intimate relationships. Given these linkages, proper treatment of sexual problems is likely to enhance overall well-being. The enormous popularity of drugs to treat erectile dysfunction provides clear evidence of this. And sexual problems may suggest underlying physiological or disease processes that would benefit from medical intervention. Information on the social distribution and correlates of sexual problems at this age is critical both for targeting service delivery to populations at greater risk and in medical treatment (Laumann et al., 2008). More generally, these findings point to the central position of late-life sexuality as a nexus where social life and connectedness, culturally influenced attitudes and practices, and biological processes associated with aging and physical functioning come together (Waite et al., in press). As such, understanding sexual patterns, their context, and their meanings for older individuals is central to promoting healthy aging in later ages.

**SEE ALSO** Volume 3: *Marriage, Later Life; Singlehood; Sleep Patterns and Behavior; Social Support, Later Life.*

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## SHANAS, ETHEL
### *1914–2005*

Ethel Shanas was born on September 6 in Chicago, Illinois, where she grew up and received her education (A.B., 1935; M.A., 1937; Ph.D., 1947) from the University of Chicago. After receiving her doctorate from the Department of Sociology, she remained at the University of Chicago on the Committee on Human Development as a research associate and instructor (1947–1952). She was a senior research analyst for the city of Chicago (1952–1953) and lecturer in social sciences at the University of Illinois at Chicago (1954–1956). From 1956 to 1961 she served as the senior study director at the National Opinion Research Center and research associate/associate professor in the Department of Sociology at the University of Chicago. She joined the University of Illinois at Chicago as a full professor of sociology starting in 1965 and as a full professor at the School of Public Health of the university's Medical Center starting in 1973. Shanas retired from academia in 1982. She lived with her husband, Lester "Steve" Perlman, in Evanston, Illinois, until her death on January 20, 2005.

Shanas taught graduate and undergraduate courses in sociology of aging and medical sociology. Using social surveys, she investigated health status and incapacity, family help patterns, living arrangements, generational relationships, financial status, and work/retirement patterns of persons 65 years of age and older living in the community. She used findings from her two national surveys to compare subgroups of older persons—across countries (in 1962, older persons in the United States, Britain, and Denmark), across time periods (data from 1962 and 1975, older persons in the United States), and across racial groups (in 1975, White and Black older persons in the United States).

Many researchers in the mid-20th century concentrated their efforts on the younger life stages, and, as a result, little was known about older people, and myths about them abounded. Additionally, federal programs began to provide older persons with benefits and services once provided by their families, and the myth of family abandonment reared its ugly head. From the 1950s through the 1970s, Shanas used survey findings to debunk many of these myths. She showed that old age is not synonymous with poor health, abandonment by family, being isolated and lonely, living in poverty, or being institutionalized.

Shanas found that the majority of persons 65 and older are relatively healthy and socially integrated through their families, friends, and work life. She also found that the family provides most of the care to its older members when they become sick and incapacitated and that institutionalization is undertaken only as a last resort.

Findings from her 1962 and 1975 surveys demonstrated that older persons are not a homogeneous group but make up two distinct life stages, the old and the very old, each with its own distinguishing characteristics. The younger group has enough income from work or retirement programs to be taken seriously in the consumer market. The majority lives independently with a spouse and sees at least one adult child often. The very old group includes more women, more widowed, and more frail and incapacitated persons, because women outlive men and sickness and incapacity are associated with advanced age.

Shanas served as a consultant to the United Nations and numerous federal agencies and a delegate to the White House Conferences on Aging. In her capacity as consultant she helped establish the Long-Term Care Minimum Data Set. Her service to professional organizations was extensive, including stints as president of the Illinois Sociological Society, the Midwest Sociological Society, and The Gerontological Society of America (GSA); vice president of the International Sociological Association's Research Committee on Aging; and secretary of the International Association of Gerontology.

Her collaborative efforts across cultures and disciplines are evident in the book *Old People in Three Industrial Societies* (Shanas et al., 1968) and in the two editions of the *Handbook of Aging and the Social Sciences* (Binstock & Shanas, 1976, 1985), which included perspectives from a broad array of social sciences. She developed an index of incapacity, which she used in her research, and during her tenure as president of GSA, President Richard M. Nixon signed the Research on Aging Act establishing a National Institute on Aging. This had been a goal of hers and of GSA. Additional contributions include her

service on the editorial boards of professional journals and the other publications she edited and wrote. Her students benefited immensely from her organizational, writing, and editing skills, the grant-supported positions and professional travel she provided them, the high expectations she set for them, and her support and encouragement as they strived to meet those expectations.

Elected a fellow of the American Sociological Association and GSA, Shanas was the Keston Memorial Lecturer at the University of Southern California (1975) and received GSA's Kleemeier Award (1977; see Shanas, 1979), the National Council on Family Relations' Burgess Award (1978), and GSA's Brookdale Award (1981). In 1979 she was elected to membership in the National Academy of Sciences' Institute of Medicine.

Shanas successfully combined a meaningful career and family life during a period when women had few supports for career development and advancement. She provides an excellent role model for persevering and overcoming barriers in attaining one's goals and making major contributions to a chosen field of study.

**SEE ALSO** Volume 3: *Oldest Old; Policy, Later Life Well-Being.*

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***Gloria D. Heinemann***

# SIBLING RELATIONSHIPS, LATER LIFE

Sibling relationships have been of great interest since earliest recorded history. For most people, it is the longest lasting of all their relationships, beginning when one sibling is first aware of the other and ending only at one sibling's death. As such, it is a unique kind of relationship.

Although they may extend over the entire life span, sibling relationships have been studied most extensively in their earlier phases, that is, in infancy, childhood, adolescence, and young adulthood. Once individuals leave their parents' home to marry and establish their own households, family studies have tended to focus on spousal relationships and parent–child relationships. However, in the decades around the turn of the 21st century, more attention has been paid to sibling relationships in middle age and old age, possibly because people and their siblings are living longer and with increasing recognition of the importance of such relationships.

## IMPORTANCE OF SIBLING RELATIONSHIPS IN OLD AGE

One might ask whether enough elderly people have living siblings to make it worthwhile to look at their sibling relationships. Clearly, as people grow older, some of their siblings do die—a small yet significant proportion of older adults have no living brothers or sisters. However, Victoria Bedford and Paula Avioli (2006) reported that in a sample of older adults, more than 80% of elders in the 65 to 84 age range still have one or more living siblings, as do 78% of those over age 85. Similarly, Victor Cicirelli (2002) found that 73% of a sample of adults over age 70 had living siblings, with about half of their original siblings still alive.

It is important to study sibling relationships in old age for several reasons. First, most siblings have some degree of genetic heritage in common as well as a shared family history that extends over a long time period. In old age, people tend to become concerned about reviewing earlier events and relationships in their lives and putting them into a mature perspective. Siblings who have shared a common past can be invaluable sources of information in clarifying memories of earlier events and people in the kin network. Second, siblings are often important sources of social support in old age, improving morale, giving advice when needed, and helping with some tangible services. Third, siblings can serve as role models for how to negotiate the last portion of the life span, dealing with such issues as retirement, health problems, and the dying process. Fourth, increases in longevity (or life span) mean that more people will have living siblings in old age than ever before. Finally, the large baby boom generation approaching old age at the beginning of the 21st century also tends to have larger sibships than the previous generation. At the same time, they have less stable marriages and fewer children, making the relationships with siblings potentially more important in old age.

## AREAS OF SIBLING RESEARCH

Researchers have gathered information about sibling relationships in old age using a wide variety of methods, including large-scale surveys, individual in-depth interviews, checklists, observations, and responses to psychological tests. Early research in the 1970s focused on how many siblings, living and dead, older adults had, how far away they lived, how often they were in contact, and whether they felt close, rivalrous, or indifferent. On average, older adults were in contact with their sibling at least monthly; relatively few were out of touch. Most reported positive feelings toward their siblings, either feeling close or very close. A large-scale study of sibling relationships over the entire adult age span (White & Riedmann, 1992a, 1992b) found that feelings of closeness between siblings were relatively stable across adulthood and old age, although amount of contact tended to decline. (Feelings toward half- and step-siblings were somewhat less close.)

However, some studies have found that sibling relationships grew stronger in the retirement years once children left home and became established. In general, rivalry and conflict between siblings tends to be low in old age, although some think that it remains beneath the surface and can recur under the right conditions. Finally, having a good relationship with a sibling in old age has been associated with better physical health, higher self-esteem, better morale, less loneliness, and less anxiety and depression (Cicirelli, 1995). However, it has not been determined whether a good sibling relationship is a contributing cause or a result of the latter conditions.

Many studies have tried to relate the older individual's sibling structure (i.e., the number of siblings, their birth order, gender, and the age spacing between them) to such things as intelligence, achievement in life, personality traits, and the nature of the sibling relationship itself (e.g., Conley, 2004). Most researchers tend to agree that relationships between pairs of sisters are the closest, with brother–brother relationships least close and sister-brother relationships in between.

Because the relationships between siblings vary greatly, some researchers have tried to classify them into types. For example, Deborah Gold (1989) identified five types of sibling relationships: the intimate (who are unusually close and devoted to each other), the congenial (who are close and friendly and see each other often), the loyal (who base their relationships on shared family values and see each other at family events), the apathetic (who have little interest and see each other infrequently), and the hostile (who have strong negative feelings of resentment and anger). Most sibling relationships are of the first three types.

A number of studies have investigated the extent to which siblings provide help and care for one another in old age. The great majority of elders say that they are ready to help their sibling if needed, although somewhat fewer say that they themselves would rely on a sibling for help. In actual fact, relatively few older adults act as primary caregivers for a sibling, and when they do it is usually because the sibling does not have a spouse or adult children who are available (Cicirelli, Coward, & Dwyer, 1992). However, more elders give siblings help that is of a secondary and occasional nature, such as help with transportation or housework. In any case, older adults seem to feel a sense of security just knowing that a sibling could be called on for help if a need should arise.

Relationships between siblings are not always constant but seem to grow closer or less close depending on ongoing events in their lives (such as divorce, death of a spouse, or a move). In general, relationships among surviving siblings appear to become closer following the death of other siblings or parents. Sibling relationships also may involve a certain degree of ambivalence, where harmonious feelings can coexist with conflict (Connidis & McMullin, 2002; Fingerman, Hay, & Birditt, 2004).

## SOME THEORETICAL APPROACHES

A number of different theories have been proposed to try to explain why sibling relationships persist over time in spite of geographic separation and the existence of other close relationships. One theoretical perspective views the sibling relationship as part of a family network of relationships (the family systems approach in psychology) or in the context of a larger kin network (the social constructionist framework in sociology). In the family systems approach (Minuchin, 1974), the relationship that an individual has with one sibling is influenced by the relationship that individual has with other siblings and by the relationship of other siblings with one another. (Earlier in the life span, the sibling subsystem, the parent–child subsystem, and the parent subsystem all interact with and influence one another; in later life, only the sibling subsystem remains but earlier influences of other portions of the system may still be evident.) In the social constructionist approach (Walker, Allen, & Connidis, 2005), sibling relationships are worked out within the broader context of the norms and practices of the larger kin network and social group. Thus sibling relationships may be closer or less close, depending on gender, social class, ethnicity, and so on, as these are interpreted within a particular kin network.

Attachment theory (Cicirelli, 1995) as applied to siblings suggests that the original attachment of the child to the mother, whether secure or insecure, serves as a prototype for the relationship with siblings. Secure

| Age | One or more living sister | One or more living brother | Any living sibling |
|---|---|---|---|
| 40–49 (n=232) | 70.7 | 73.3 | 99.6 (n=235) |
| 55–64 (n=171) | 67.8 | 69.0 | 91.2 (n=182) |
| 65–74 (n=95) | 77.9 | 65.3 | 80.3 (n=117) |
| 75–84 (n=136) | 58.3 | 64.0 | 83.8 (n=99) |
| 85+ (n=51) | 52.9 | 37.3 | 78.9 (n=38) |

SOURCE: The 1986 Data of the General Social Survey Cumulative File.

***Table 1.*** *Percent of respondents with siblings in later life.* CENGAGE LEARNING, GALE.

attachments explain sibling closeness and helping behavior, whereas insecure anxious attachments may account for ambivalent sibling relationships, and disturbed insecure attachments may account for hostile or abusive relationships. The attachment bond is thought to continue throughout life and is responsible for siblings' need for occasional contact and resulting positive feelings.

Exchange theory has also been used to explain sibling relationships in adulthood. That is, siblings strive to maintain a balance in the relationship between what each gives to the relationship and what each receives in return. The relationship suffers when the imbalance becomes too great.

## RESEARCH

Some recent studies have explored the factors associated with closer sibling relationships in old age. Genetic similarity was found to be important, with identical twins living closer, having more contact, exchanging more support, and feeling emotionally closer than fraternal twins, who in turn had a closer relationship than non-twin siblings (Neyer, 2002). Birth order was also found to be important, with firstborns having more sibling contact than later-borns (Pollet & Nettle, 2007). Major life events were also found to be associated with closer sibling relationships. Elders who experienced the death of a parent in childhood felt closer to their siblings in old age than those who grew up in intact families (Mack, 2004), and loss of a spouse in later adulthood was related to increased sibling contact and sibling support (Guiaux, von Tilburg, & van Groenou, 2007).

Another area of sibling research is concerned with the effects of a sibling's death on the views of older adults about death in general (Cicirelli, 2002). Those who had more deceased siblings tended to have less fear of the dying process itself, perhaps through seeing how their deceased siblings handled their decline and death, but a greater fear of the destruction of the body after death. However, those who saw death as involving an afterlife tended to have closer relationships to their living siblings. In general, elders felt closer to their remaining living siblings following sibling death; those who had a poor relationship with deceased siblings were more likely to experience depressive symptoms in old age.

## AREAS FOR FUTURE RESEARCH

As noted earlier, sibling relationships in old age have not been extensively studied, and there are a number of areas of study where further work is needed. First, just who is considered to be a sibling needs to be more carefully defined in future studies. Most past research has looked at full biological siblings and assumed that they were reared in intact families. However, with the increasing prevalence of alternative family types, relationships with half-siblings, step-siblings, adoptive siblings, and fictive or social siblings need to be examined more carefully. Factors that may influence the nature of the interpersonal relationship between siblings include the degree of genetic similarity (ranging from all genes in common in the case of identical twins, to none in the case of adoptive or step-siblings), whether they are legally regarded as siblings, whether they were reared together or apart (including the amount of time they lived together in childhood). Research is needed on how these factors influence the sibling relationship in later life, as well as the factors that contribute to closer relationships.

Another area where further research is needed involves looking more closely at the nuances of sibling relationship in old age in order to determine what things contribute to maintaining a close sibling relationship in the last portion of life. If there is ambivalence in the sibling relationship, what kinds of things are sources of problems, and how can they be dealt with to improve the sibling relationship?

More information is needed about how the relationship between a sibling pair functions within the entire sibling group and in the context of the larger family network. For example, little is known about how spouses (or partners) influence the sibling relationship in old age, whether dislike of a spouse may interfere with sibling contact or influence feelings, and so on.

Finally, studies of changes in sibling relationships over time as the baby boom generation moves into old age would be of great interest. Researchers need to determine the effect of smaller numbers of children and more failed marriages compared to the previous generation on sibling relationships.

**SEE ALSO** Volume 2: *Family and Household Structure, Adulthood;* Volume 3: *Caregiving; Social Support, Later Life.*

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# SINGLEHOOD

In research on the life course and aging, singlehood usually is defined in terms of a person's legal marital status; it is considered the status of never having been legally or officially (heterosexually) married. In popular discourse and in some research studies, however, the term *single* often is used as a synonym for *unmarried* (Connidis, 2001) or may be applied more broadly to someone without a current partner (not married, cohabiting, or otherwise romantically or intimately involved) or someone looking for a partner (Koropeckyj-Cox, 2005).

These inconsistencies in the way singlehood is defined reflect changes in attitudes and social norms that have transformed the meanings and significance of marriage in European and American societies and in many other countries around the world. In the last three decades of the 20th century and the first decade of the 21st, life paths have become more varied and complex and a greater variety of relationships have become available to formally single adults, including nonmarital cohabitation, living-apart-together relationships, same-sex enduring partnerships (and in some countries and states legally recognized same-sex marriages), and other sexually intimate relationships (Cooney & Dunne, 2001). This diversity challenges earlier assumptions and generalizations about singlehood with regard to living arrangements, past life history, sexuality, and relationships and raises important questions about these and other dimensions that may be more informative than formal marital status for understanding well-being in midlife and old age.

## HISTORICAL PREVALENCE AND SIGNIFICANCE OF SINGLEHOOD

Historical patterns related to the timing and likelihood of marriage have shaped the life courses of past and current cohorts of older adults. Singlehood and relatively late marriages were common historically in northern and western Europe, particularly in the middle to late 19th century and the early 20th century (Hajnal, 1982) and also were characteristic of the United States, Canada, and Australia in that period. Getting married was regarded as an important rite of passage into adulthood and into socially sanctioned sexual activity and childbearing, and economic stability and maturity were regarded as prerequisites. Late ages at marriage meant that singlehood was normative in young adulthood. Median ages at first marriage in 1900 were about 26 years for men and 22 years for women (U.S. Census Bureau, 2006), and about 40% of men and 31% of women over age 15 never married (U.S. Census Bureau, 2004).

Lifelong singlehood and celibacy has a long history in religious vocations and the priesthood, and the single status was associated with valued social roles in the extended family and community, particularly for women (Watkins, 1984). During the Victorian era and the industrial revolution, economic circumstances (and immigration in the United States) reinforced a pattern

of delayed marriage. Adolescents and young adults contributed to the family economy, and stem family living arrangements were common in which a never-married adult child remained in the parental home, contributing income and helping to care for aged parents (Guinnane, 1991; Hareven, 1982). The economic hardships and uncertainties of the Great Depression continued this pattern of late marriage and economic interdependence into the 1930s.

After World War II, economic prosperity and government programs for returning veterans stimulated a shift toward earlier marriage and higher fertility rates, and marriage was transformed from an economic and social institution into a more private, intimate, and procreative relationship (Cherlin, 2004; Coontz, 2005). Social attitudes and popular images promoted normative expectations of heterosexual marriage, parenthood, and domesticity, and single and childless adults, along with gay men and lesbians, were regarded with pity or disapproval (Coontz, 2005; May, 1988, 1995). In 1950 the median age at marriage in the United States had declined to about 23 years for men and 20 for women (U. S. Census Bureau, 2006). For adults over age 65, this fluctuation has meant that the prevalence of singlehood has varied from 8.5 and 7% of women and men, respectively, in 1960, reflecting the lower marriage rates of the Depression era, to just over 4% of women and men in 2000, reflecting the aging of those who were young adults during the postwar baby boom (He, Sengupta, Velkoff, & DeBarros, 2005).

Since the 1960s ages at marriage and the proportions remaining single have been increasing, and the lives of never-married adults have come to reflect a wider variety of possible life paths that may include nonmarital cohabitation, nonmarital childbearing, and same-sex relationships (Cooney & Dunne, 2001). As a result of these social changes, the meanings and implications of singlehood over the life course have varied across cohorts of older men and women.

## OVERVIEW OF RESEARCH ON SINGLEHOOD

The postwar context provided the milieu in which many of the foundational social scientific theories of family and aging were developed, including structural functionalism in the sociology of the family, attachment theory in psychology, and disengagement theory and activity theory in the study of aging. Each of these theories emphasized the centrality and symbolic significance of relationships, particularly in childhood and marriage. In sociological research, the structural-functionalist perspective in particular conceptualized heterosexual marriage as universal and all but mandatory; those who remained single and/or childless were regarded as deviant or incomplete (Cherlin, 2008). Erik Erikson's (1963) early formulations of the stages of adult development also emphasized marriage and childbearing as central to achieving the normative tasks of intimacy, generativity, and integrity, although his later work acknowledged the potential for generative activities that did not require procreation (Erikson, 1982).

Gerontological research has defined family structure as a primary indicator of resources for social and instrumental support in old age. Those without kin have been seen as potentially isolated and vulnerable, stimulating interest in using survey data to assess and compare the relative well-being of never-married, unmarried, and/or childless older adults (Keith, 1986; Lawton, Moss, & Kleban, 1984; Ward, 1979). Single adults have been compared with their married peers on a variety of measures of relative well-being, sometimes combining all the unmarried and sometimes distinguishing between the never married and the formerly married (widowed or divorced). In general, single older adults have been described as more socially isolated, more lonely and depressed, and more likely to live in a nursing home in old age, although research findings on gender differences and on subjective measures of well-being have been mixed.

Several studies in the 1970s and 1980s used more qualitative approaches to examine the lives of single older adults on their own terms and in a variety of circumstances. Those studies documented the diversity of experiences of single older adults and examined individuals and families within their larger social and historical contexts (Allen & Pickett, 1987). One of the most influential was Peter Stein's (1976) typology of singlehood, which provided a multidimensional view of variations among single adults that took into account whether the single status was chosen or involuntary and whether it was perceived as temporary or stable.

These dimensions of choice and time horizon have helped explain the variability in the psychological well-being, behaviors, and perspectives of single adults (Connidis, 2001; Dykstra, 1995). Robert Rubinstein (1986), an anthropologist, looked specifically at the experiences of older men living alone, including a substantial number who were single, and the factors related to greater vulnerability or more positive well-being. The sociologist Katherine Allen (1989; see also Allen & Pickett, 1987) documented the diverse life paths of older never-married women born in the early 1900s, particularly their family relationships, caregiving roles, and social ties. Other researchers provided in-depth portraits of generally invisible subpopulations that were composed disproportionately of never-married older adults, including

marginalized older men living in single-room occupancy hotels (Cohen & Sokolovsky, 1989) and older lesbians (Kehoe, 1989). Those studies expanded research on aging and singlehood by providing a glimpse of the growing and previously hidden diversity among older adults.

In the last decade of the 20th century and the first decade of the 21st, research on singlehood, aging, and the life course continued to broaden, reflecting contemporary trends and the aging of new cohorts; their varied experiences of singlehood show the influence of the dramatic social changes that occurred in their lifetimes (Connidis, 2001).

## KEY THEMES IN CONTEMPORARY RESEARCH

A persistent thread in research on marital status in later life is the legacy of structural functionalism that has defined unmarried older adults as a disadvantaged group because of their lack of a spouse and their official marital status (Waite, 1995; Waite & Gallagher, 2000). This research has used large surveys to examine how marital status, particularly singlehood, is related to various measures of objective circumstances and subjective well-being. These studies span a number of countries, including the United States, Canada, the Netherlands, the United Kingdom, and Germany, with comparable findings. A prominent theme in this research is the fundamental importance of gender in shaping the experiences of singlehood and the impact of marriage selection (the processes by which individuals are selected into marriage on the basis of their valued social characteristics) and larger structural circumstances on the relative well-being of single adults.

In general, highly educated women constitute an important subset among the never married (Barrett, 1999); remaining single gave those women greater independence to pursue higher education, more continuous work careers, and greater career advancement compared with their ever-married peers. Despite their educational and work histories, however, single women's earnings and retirement incomes have been lower than those of men (Koropeckyj-Cox & Call, 2007). Single men, in contrast, are somewhat less educated and have lower incomes compared with those who have married, likely reflecting a preference for marrying more advantaged men. Median household and per capita wealth are lower among all unmarried older adults, including the never married, compared with their married peers (Lupton & Smith, 1994, cited in Waite, 1995). These economic disadvantages reflect lower relative earnings among single adults (particularly women) as well as the cumulative effects of having to cover food, housing, and other expenses on a single income (i.e., lacking the economies of scale enjoyed by larger households). Higher mortality and poorer health are linked with being unmarried, reflecting the selection of healthier individuals into marriage and the potential benefits of the marital relationship for physical and mental health, particularly for men (Waite, 1995). The disadvantages for never-married adults appear greatest in countries where singlehood is rarer and more marginalized (Kisker & Goldman, 1987). Never-married older adults are somewhat less likely to live alone than are those who are divorced or widowed, often living with siblings or other relatives (Choi, 1996; Stull & Scarisbruck-Hauser, 1989). However, being single and childless in old age generally is linked with a greater reliance on formal paid services or living in a nursing home (Freedman, 1996).

Research on the social support networks and contacts of single older adults is mixed. Some studies have described never-married adults as more isolated (Gubrium, 1975), less socially connected, and less likely to have a confidant than their ever-married peers (Barrett, 1999; Marks, 1996). However, single women have more contact with relatives and larger social networks than do single men (Barrett, 1999). Single adults have been described as representing the extremes of social interaction, from those who are highly integrated and active (particularly single women) to those who are more isolated and vulnerable (Seccombe & Ishii-Kuntz, 1994). Over the life course, many single adults cultivate and maintain contact with friends who later may provide emotional and some kinds of instrumental support (Dykstra, 1990; Rubinstein, 1987; Rubinstein, Alexander, Goodman, & Luborsky, 1991; Seccombe & Ishii-Kuntz, 1994). Jenny DeJong Gierveld (2003) and other European scholars (e.g., Borell & Karlsson, 2003) have also noted the emergence of living-apart-together relationships, which provide companionship and social support for single adults while maintaining independence. For older single women, living-apart-together arrangements also offer the benefits of a relationship while avoiding some of the traditionally gendered expectations of marriage, including additional housework or looking after a partner.

There are also consistent gender differences in various measures of relative subjective well-being among single older adults. Unmarried men are generally more lonely and depressed than married men are, whereas never-married women are similar to those who are married and report less loneliness and depression than do their formerly married peers (Koropeckyj-Cox, 1998). Single men are significantly lonelier than single women (Dykstra, 1995; Zhang & Hayward, 2001). This gender difference can be explained by women's greater contact with kin and friends (Pinquart, 2003). Pearl Dykstra

(1995) noted that a lack of friendships is a stronger predictor of loneliness than is being single. Those who prefer singlehood and express a low desire for a partner show the most positive well-being, reflecting the importance of perceptions of singlehood as a chosen versus an involuntary status (Dykstra, 1995).

A growing body of qualitative research has explored the meanings of singlehood, with a focus on never-married White women, a group that appears to be relatively advantaged with regard to education, careers, and subjective well-being. These studies often incorporate feminist approaches and criticize comparative methods for reinforcing marriage-centered heteronormative assumptions and "a bias for the norm" (McDill, Hall, & Turell, 2006, p. 41; see also Allen, 1989; Davies, 2003). Their findings highlight the significance of independence and choice and report generally high levels of satisfaction and social integration (Baumbusch, 2004; McDill et al., 2006) as well as the complex identity work (Reynolds & Taylor, 2005; Reynolds, Wetherell, & Taylor, 2007), ambivalence about singlehood (Lewis & Moon, 1997), and varied life transitions in the lives of single women (Davies, 1995). Other studies have explored the lives of lesbians, many of whom are technically classified as never married and may not be in a current relationship; their life courses, identities, relationships, and experiences of aging reveal both similarities to and divergences from those of single heterosexual women (Jones & Nystrom, 2002; Rosenfeld, 1999).

## FUTURE RESEARCH DIRECTIONS

The transformations of marriage and greater variety of relationships and life paths have called into question the usefulness of singlehood as an analytic and conceptual category, particularly as it was defined in earlier studies. Definitions that are based on official legal marital status are no longer necessarily informative as they may mask very different histories and current relationships. However, the continuing symbolic significance of marriage as a status marker (Cherlin, 2004) with legal recognition and benefits argues for varied approaches to understanding families, relationships, well-being, and the life course that take into account the different dimensions of marital, residential, and relationship statuses. Also, research on the life course should attend to both similarities and differences among groups, such as never-married and late-marrying adults, cohabiting and living-apart-together couples, and never-married mothers and those who have cohabited, married, or divorced. Future research will have to attend to how these dimensions shape health, psychological well-being, social functioning and connectedness, and resources differentially over the life course.

Although both survey-based research and qualitative research on singlehood have been expanding, this is still a relatively neglected area, particularly with regard to the experiences of racial-ethnic and sexual minorities (Allen & Walker, 2006; Barrett, 1999). Further, there are few in-depth studies of never-married men despite their numerical growth and the more negative implications of singlehood for men (Cooney & Dunne, 2001). Future research should explore these important axes of diversity and the way they intersect with one another and with gender and age relations. The growing body of work in the qualitative traditions, including constructionist, feminist, phenomenological, and narrative approaches, has contributed many insights into the life course, aging, gender, and social relationships, but those observations often are limited by narrow samples. Future research would benefit from integrating these conceptual frameworks into large-scale representative and comparative survey projects.

**SEE ALSO** Volume 2: *Family and Household Structure, Adulthood;* Volume 3: *Cohort; Loneliness, Later Life; Sexual Activity, Later Life; Social Integration/Isolation, Later Life.*

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# SLEEP PATTERNS AND BEHAVIOR

Sleep, a behavior common to all people, has been described as "a reversible behavioral state of perceptual disengagement from and unresponsiveness to the environment" (Carskadon & Dement 2005, p. 13). Sleep behavior usually includes being in a resting state, being quiet, and having one's eyes closed. It was once considered a passive state during which the body and brain were inactive. This view changed during the mid-20th century when technological advances in humans' ability to record brain waves and other bodily functions, known as polysomnography, led to the discovery that sleep is an active process during which the brain is anything but passive.

## NREM AND REM SLEEP

Polysomnography, which involves applying electrodes to a person's head and body to record brain wave activity, eye movement, and neck muscle tension, allows researchers and clinicians to distinguish sleep from wake. Measurement of eye movement is used to divide sleep into two states: non-rapid eye movement (NREM) and rapid eye movement (REM) sleep.

During NREM, people experience little or no eye movement, muscle tone, and physiological arousal. Unlike with REM sleep, dreaming is rare. NREM sleep is composed of four stages defined by distinct brain wave activity patterns. Stage one is characterized by low-voltage brain wave activity between 4 and 6 cycles per second (Morgan, 2000). During stage one, people are drowsy and may deny that they were sleeping if awakened. Stage two is defined by the appearance of sleep spindles (0.5 to 1.5-second bursts of 12 to 14 cycles per second brain wave activity) and K-complexes (large, slow peaks of activity followed by smaller valleys lasting at least 0.5 second) (Morgan, 2000). Stages three and four are typically grouped together and referred to as slow wave sleep. Brain wave activity is the slowest at 1 to 4 cycles per second and, unlike REM or other NREM stages, is very uniform (Morgan, 2000). In stage three, 20 to 50% of brain wave activity is slow wave, whereas in stage four, more than 50% is slow wave activity (Carskadon & Rechtschaffen, 2005).

During REM sleep, people experience rapid eye movement, loss of muscle tone, brain wave activity similar to stage one NREM sleep, and high levels of physiological arousal (i.e., increased pulse rate, blood pressure, and respiration rate). REM sleep is the state when most people dream.

People enter sleep through NREM and proceed to cycle through all four stages of NREM before an REM episode will occur. A full sleep cycle including both NREM and REM typically lasts 90 to 120 minutes (Carskadon & Dement, 2005). People typically experience four to five sleep cycles per night, and approximately 80% of the total sleep period is NREM. The length of NREM and REM sleep change over the course of the night. Specifically, as people cycle through NREM and REM, REM and stage two NREM episodes increase, whereas stages three and four NREM decrease (Carskadon & Dement, 2005).

## MEASURING SLEEP

Polysomnography is considered the gold standard method for measuring sleep because it allows clinicians and researchers to study the sleep stages and their transitions—known as sleep architecture (Carskadon & Rechtschaffen, 2005). Actigraphy, which consists of a wristwatch-like device, is also used to measure sleep objectively. Actigraphy does not record brain wave activity, but instead measures limb movements. The premise underlying actigraphy is that people's movement is limited during sleep; therefore, movement is a proxy measure of sleep (i.e., a high level of movement signals that the person is awake, whereas little or no movement indicates that they are asleep). Although actigraphy is not as informative as polysomnography, it can be used to capture people's sleep patterns in their home environments for a few days to a few weeks or even longer. Mobile versions of polysomnography are available for home use. However, home-based polysomnography is typically used to collect information for only a night or two, because it is expensive and cumbersome (requiring the attachment of electrodes each evening).

Sleep diaries are the most commonly used subjective measure of sleep and provide important information on people's perceptions of their sleep. Different versions are available, but no version has been shown to be superior.

Sleep diaries ask people to provide estimates of their sleep from the night before and generally include information on people's bedtimes and when they wake up, how long they took to fall asleep, how many times they awoke during the night and for how long, and the total amount of time they spent sleeping. Sleep diaries are generally collected for 1 to 2 weeks. Although they do not indicate sleep stages or movement during the night, sleep diaries are widely used because they are the cheapest and most efficient way to measure sleep.

## SLEEP IN LATER LIFE

Sleep and sleep architecture are not static but change as people age. As babies people have shorter NREM-REM cycles (about 50 minutes), begin sleep with REM rather than NREM, and sleep for most of a given 24-hour period. Distinct NREM stages do not appear until several months post-birth. During adolescence people experience 40% less slow wave sleep than they did as children (Carskadon & Dement, 2005). During later life these sleep architecture changes continue: First, people report poorer sleep quality across their life spans, especially during midlife to later life; second, the total amount of sleep decreases from an average of 7 hours to 6 hours per night (Nau, McCrae, & Lichstein, 2005); third, the daily amount of sleep is more variable; fourth, older adults report more arousals during the middle of the night with eight awakenings per night on average (Morgan, 2000); and fifth, these increased arousals are associated with older adults spending more time in stages one and two and less time in stages three and four (i.e., slow wave sleep). Although these changes occur in both men and women, men have significantly worse sleep architecture deterioration. Despite this, some research indicates that women are more likely to complain about their sleep and seek help for poor sleep (Morgan, 2000). Finally, older adults have more frequent shifts in sleep stages than do younger adults.

## INSOMNIA

A major focus of sleep research is insomnia occurring in later life. Insomnia involves a complaint of difficulty initiating sleep, maintaining sleep, or non-restorative sleep that lasts at least 1 month and causes difficulty with daytime functioning (American Psychiatric Association, 2000). Non-restorative sleep involves the complaint of poor quality sleep even though the person has had adequate circumstances and opportunity for sleep. Insomnia complaints are more common and more severe in older adults. Whereas insomnia in younger adults is typically transient, insomnia in later life is often chronic and related to several factors, including changes in sleep architecture and health.

At all ages, however, insomnia is a risk factor for depression, anxiety, and substance abuse. Insomnia can be a warning sign to a clinician for other psychological disorders. The reverse is also true: People with other psychological disorders often develop insomnia. People with depression, anxiety, and substance abuse issues frequently report difficulty initiating sleep, maintaining sleep, or non-restorative sleep; however, the factors that initially precipitate the insomnia are different. For people with depression, their low mood may exacerbate their sleep difficulties. People with anxiety experience excessive worry, which can cause them to have difficulty falling asleep and staying asleep. Also people who abuse either legal or illegal substances may experience different side effects from the drugs, which may induce symptoms of insomnia.

Although insomnia may initially be a risk factor and symptom of these and other psychological disorders, the insomnia, many times, becomes a separate disorder. This means that an individual may continue to suffer from insomnia even though the initial psychological disorder has been effectively treated. The insomnia develops a life of its own because the individual begins to develop cognitions and behaviors that contribute to poor sleep. For example, the individual may begin to associate the bedroom with poor sleep because he or she has had difficulty falling asleep in the past. If this association is strong, the individual may have difficulty falling asleep because he or she associates the bedroom with being awake. In addition, the individual may begin to nap during the day or increase caffeine intake to cope with the insomnia. These behaviors may initially help the individual; however, in the long term, they maintain the insomnia. Cognitive behavioral treatment for insomnia targets these types of cognitions and behaviors.

Insomnia is also a warning sign of other sleep disorders, including apnea. Sleep apnea is characterized by partial pauses or complete cessation in breathing during the night. People with sleep apnea experience these partial or complete pauses five or more times per hour throughout the night. The poor breathing during the night is typically unknown to the person. The person will report, however, symptoms of insomnia, such as non-restorative sleep and difficulty with daytime functioning. Clinicians who suspect apnea or another sleep disorder, which may have the initial appearance of insomnia, will refer a patient for a sleep study. A sleep study involves an overnight visit to a sleep laboratory during which the patient's sleep is measured with polysomnography.

## INSOMNIA TREATMENT

Insomnia is treated in multiple ways for older adults. Sleep medications are the most common treatment. Although

medications are beneficial for short-term difficulties, older individuals experience insomnia for 7 to 12 years on average (McCrae et al., 2003). Sleep medications may not be the best option for these individuals because they do not treat the behaviors contributing to the maintenance of chronic insomnia (i.e., negative thinking about sleep). With chronic medication use, older individuals are susceptible to developing a new condition, hypnotic dependent insomnia, characterized by dependency on the sleep medication and a worsening of insomnia (called rebound insomnia) and increased anxiety during withdrawal.

Cognitive behavioral treatment successfully treats insomnia without dependency concerns. Specifically, it has been shown to decrease total wake time during the night. In addition to relaxation, most treatment packages utilize sleep education, sleep hygiene, stimulus control, and sleep restriction: Sleep education reviews age-related changes in sleep and realistic expectations; sleep hygiene involves reviewing behaviors that may contribute to poor sleep (e.g., caffeine use); stimulus control focuses on associating the bedroom environment with sleep; and sleep restriction involves limiting time in bed. People with insomnia spend large amounts of time awake in bed in the hopes of catching up on sleep. By restricting time in bed, people reduce the time spent awake in bed worrying about not sleeping. Finally, relaxation is used to decrease arousal, which increases the likelihood of sleep.

Older adults also experience other sleep disorders at a higher rate including sleep-related breathing disorders, periodic leg movements (repetitive leg movements during sleep), and restless leg syndrome (irresistible urges to move one's legs, especially when resting). Reason for the increased prevalence is uncertain. Medical devices (to help breathing) and medications are typically recommended to decrease symptoms. Insomnia is highly comorbid with these disorders because they promote nocturnal awakenings. Unfortunately, after these disorders are treated, the insomnia often persists because of the learned awakening behavior.

## FUTURE DIRECTIONS

Sleep research continues to be a priority. People sleep for one-third of their lives; however, researchers still do not know everything that happens during sleep or how people's bodies differ during sleep and while awake. Research indicates that respiration, heart rate, and multiple other physiological behaviors change during sleep. However, scientific understanding of the exact mechanisms underlying these changes remains incomplete.

**SEE ALSO** Volume 3: *Mental Health, Later Life; Sexual Activity, Later Life.*

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# SOCIAL INTEGRATION/ ISOLATION, LATER LIFE

Dating back to the work of late 19th-century sociologist Emile Durkheim, social scientists have studied people's social embeddedness. The quality and number of one's personal relationships, active involvement in voluntary organizations, and social integration in general are the result of the individual's choices and actions, yet also are shaped by societal circumstances and contexts. Sociologists have studied whether social changes such as changes in family form and the so-called breaking up of the nuclear family (Popenoe, 1993) have led to declining levels of civic engagement and social integration (Putnam, 1995).

## DEFINING SOCIAL ISOLATION

Social isolation refers to the absence of close personal relationships with other people. Isolated people do not have others with whom they maintain regular contact, and many maintain only a very small number of relationships that entail only superficial contact. Social isolation refers to the objective characteristic of a situation, or the actual number of persons in one's life, rather than subjective characteristics, such as one's perception that their social ties are insufficient. An important question facing life course sociologists, and especially social gerontologists, is: To what extent is an individual truly "alone"? One can envision a continuum ranging from complete social isolation at one end to being fully integrated in social relationships and social contexts at the other. The latter end may encompass social contexts such as the household, the family, local organizations such as the church or voluntary organizations, or a virtual context in which people maintain geographically distant contact by means of modern communication techniques, including e-mail or communication using social networking web sites.

Although people who live alone may appear to be at risk of social isolation, many maintain a satisfying network of meaningful social relationships outside their household. Conversely, people in a strained or frosty marriage may feel social isolation, especially if they have few friends or a limited social network outside of the marriage. A social network consists of the set of people with whom one has a direct personal relationship. It might include close family members (e.g., spouse, children), distant relatives (e.g., cousins, in-laws), and a variety of nonkin relationships (e.g., neighbors, friends, colleagues, fellow club members).

## THEORETICAL APPROACHES

Old age is a stage in the life course that may be viewed as marked by social isolation. Part of the reason why older people are vulnerable to social isolation is that there are few social expectations about the roles for older adults to fulfill. This perspective, called *disengagement theory*, posits that older people will withdraw themselves from society—as they retire from work outside the house and as friends and family members die—thus resulting in deterioration of their social networks (Cumming, Dean, Newell, & McCaffrey, 1960). Although disengagement theory has garnered little empirical support in recent years, it has provided the foundation for the development of socioemotional selectivity theory (Carstensen, 1992). This theory proposes that as they face the end of life, older people specifically disengage from their more and casual distant relationships and instead place greater emphasis on their closest personal ties. Older people are believed to find their emotional engagement with core network members to be particularly rewarding in maintaining their social identity and sharing joys and sorrows. Although the size of older adults' social networks may decline, levels of satisfaction are as high as ever, because older adults' needs change and they prefer the company and support of a smaller, although close-knit, group of significant others.

Older people vary widely in their needs and resources, however (Baltes & Carstensen, 1996). The life-course approach offers a framework for understanding heterogeneity in late life. Life transitions and the trajectories in which they are embedded are a central concern of life-course studies. Many transitions follow socially structured sequences, and many life transitions are intertwined. For example, older adults may move to a residential care facility after death of the spouse who had previously been providing care. The extent to which an older adult is socially isolated or integrated also is shaped by social contexts. In other words, individuals are not simply *excluded*, but there are specific population groups who are most susceptible to the experiences of marginalization and, in turn, social isolation. For example, people whose spouses have died may be excluded from activities with married couples. Specific life events in old age that diminish social integration include widowhood or widowerhood, death or incapacitation of network members, and lack of important resources—such as good health or an ability to travel—both of which help older adults to maintain their relationships (Antonucci & Akiyama, 1987; Morgan, 1988).

## METHODS FOR STUDYING SOCIAL INTEGRATION

Social scientists use a variety of methods for mapping social networks. Mapping personal networks can provide data showing to what extent people are socially isolated versus integrated (Broese van Groenou & van Tilburg,

2007). Some of these methods focus on the exchange of emotional, instrumental, and material support within relationships, whereas others focus on emotional nature of one's interpersonal ties. A third approach is to document the number and type of formal role relationships one has (e.g., spouse, sibling, worker). Researchers typically select a method that reflects their specific research interests. A key component of all three methods is that a single respondent is asked to provide information about the people in his or her social network; that is, the other network members do not provide assessments of the relationship. As a first step, respondents are usually asked to identify by name those persons (if any) whom they believe make up their network. This procedure results in an assessment of individual's network size, which can vary from no one to a large number of people.

Measures of isolation and integration may reflect both objective and subjective aspects of one's social networks. The number of people in one's network is considered an objective characteristic. By contrast, the feeling that one is loved and supported is considered a subjective measure. Key concepts may be measured in either objective or subjective terms. For example, social isolation may reflect on objective factors, such as having no close relationships, and loneliness may reflect subjective characteristics, such as feeling one has unsatisfying relationships. The two do not necessarily overlap; socially isolated people are not necessarily lonely, and lonely people are not necessarily socially isolated in an objective sense. Where a person ends up on the subjective continuum—ranging from not at all lonely to severely lonely—may also depend on his or her subjective standards and expectations and not only on the actual number of persons in one's network (Perlman & Peplau, 1981). Some people with few social contacts might feel lonely; others might feel sufficiently embedded. An example of the latter situation is that of a person who cherishes his or her privacy and actively seeks to avoid undesired social contacts.

## HOW MANY PEOPLE ARE SOCIALLY ISOLATED?

Estimates of the proportion of the general population that is socially isolated depend upon the definition of a social "tie." For example, one study (Höllinger & Haller, 1990) revealed that between 5% and 23% of the respondents in Germany and Austria stated that they had "no friends." These differences may reflect sociocultural differences in how people define the term *friendship*. In some contexts, friendship might refer to a relationship with a person whom one likes very much and with whom one shares a wide range of activities. In other cases, however, friendship refers to merely being casual acquaintances and sharing only a specific interest or activity.

***Isolation.*** *Seniors can feel isolated after losing a spouse.* DOUG CROUCH/PHOTOGRAPHER'S CHOICE RR/GETTY IMAGES.

McPherson, Smith-Lovin, and Brashears (2006) reported that about half the U.S. population say that they do not have anyone with whom they can discuss important matters. The authors of that study concluded that many people in the United States may have weak or nonexistent ties to members of their communities and neighborhoods. However, they also acknowledged that they had limited information on each person's social networks and thus might have overestimated the number of social isolates (or people who did not have a close confidant with whom to share their thoughts). The present author adds the further critique that having "no confidant" is not necessarily the same thing as being socially isolated. For example, one study of older adults living in London revealed that 13% did not have a confidant; however, all had at least one personal network member (Bowling, Grundy, & Farquhar, 1995). In many studies that adopted other methods for assessing social integration, much larger network sizes were observed. Typical network sizes ranged from about 5 to 10 people; in some studies,

higher averages were observed. This indicates that most people are surrounded by a set of people to whom they can turn for help, advice, or emotional support. Consequently, in these studies, only a small number of socially isolated people is observed. Another study of 3,000 Dutch older adults (van Tilburg, 1998) found that only 6 respondents could not identify any network members; the average network size was around 14 people.

Life-course scholars agree that the number of one's social contacts gradually decreases with advancing age. This decrease is partly due to functional or social loss: spousal bereavement, physical and cognitive impairments, or the death of other members of the network. Among older people living at the beginning of the 21st century these events often occur only at an advanced age; age 75 is sometimes taken as a marker for the average age at which a downward development of social integration begins. Given that many older adults start this phase of life with a large personal network, few will end their life socially isolated. Furthermore, losses may be accompanied by gains. For example, retirement enables people to pursue new activities and relationships, as they fill their nonwork hours with friendships and hobbies. Further, increases in life span enable many grandparents to develop emotionally close relationships with their grandchildren when they mature. Increased demands for personal care among older adults may strengthen ties between care givers and care recipients.

## CONSEQUENCES OF SOCIAL ISOLATION

The negative consequences of being socially isolated have been documented extensively. People with few contacts may have difficulty in finding a job: Labor market marginality leads to poverty and social isolation, which in turn reinforce the risk of long-term unemployment (Gallie, Paugam, & Jacobs, 2003). Vast evidence suggests that social isolation can threaten one's psychological health, indicated by an elevated risk of depression, loneliness, and suicide among people with few or weak social ties. Furthermore, isolated people lack the health advantages of being connected to other people. Networks contribute to a healthy lifestyle, provide access to information for disease prevention, reduce psychological stress, and enhance beneficiary physiologic responses (Berkman, Glass, Brisette, & Seeman, 2000). Finally, people who lack social ties are more likely to die prematurely, compared with findings in people with more extensive contacts (Berkman & Syme, 1979). It is not the mere presence of relationships that matter but also the frequency with which one maintains contact, how geographically proximate one's network members are, and how emotionally close and fulfilling these relationships are.

## FUTURE DIRECTIONS

Personal relationships are shaped by sociohistorical context. As such, future studies focusing on aging baby boomers may reveal patterns very different from the ones detected among current cohorts of older adults. Two macrosocial changes may have particularly powerful ramifications: changing family structures and the weakening of the geographical foundation of networks.

Decreasing family size and changing family structure (i.e., increasing rates of divorce and remarriage) have typically been interpreted as a sign of decreasing importance of the family. Despite pessimistic assessments of how such changes may affect the social lives of older adults, most research reveals that levels of intergenerational contact and support have not declined concomitantly (Bengston, 2001). However, in the second half of the 20th century the number of childless people has increased. As such, older adults may have fewer—but not necessarily poorer quality—social ties in the future. Furthermore, family structures are becoming increasingly complex, and traditional definitions of "family" need to be revised. Relatively high rates of remarriage following divorce (and to a lesser extent, widowhood) have created a growth in the number of stepfamilies. In stepfamilies, family members' roles, norms, and obligations are less clearly defined than in first-marriage families. The loosening of the role-based character of primary kinship is exemplary for other types of personal relationships. Social bonds may be more flexible and fluid. However, not all social observers are optimistic that these social changes will be beneficial to older adults; Allan (2001) has countered that these changes may lead to a fragmented and less predictable social life that in turn may increase the risk of isolation.

A second and related development is the weakening of the geographic basis of relationships. With increasing geographic mobility and widespread reliance on the Internet, networks have transformed from local communities to virtual communities (Wellman, 1999). Among future older generations, social networks may ultimately comprise a mixture of traditional networks, consisting of local kin, friends, and members of social organizations, as well as global networks of long-distance relationships based on shared interests. Although some people profit from technological developments that expand the traditional boundaries of social networks, others will have greater difficulty accessing, initiating, and maintaining such long-distance relationships.

These new family and network structures have predominantly been created in the second half of the 20th century among people who will become the next generation of older people. It is unknown to what extent these developments will lead to an increasing number of

socially isolated people. Are the risks of social isolation anchored in the life course? For example, is vulnerability accumulated across various domains of life, such as when people have a small family, live in a deprived neighborhood, and have a history of divorce or nonemployment? Are deficits in personal networks treatable in old age? These questions will direct the future research agenda.

**SEE ALSO** Volume 2: *Durkheim, Émile; Social Support, Adulthood;* Volume 3: *Childlessness; Loneliness, Later Life; Marriage, Later Life; Singlehood; Widowhood.*

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# SOCIAL SECURITY

Social Security provides critical protections throughout the lives of virtually all persons in the United States. Enacted in 1935, Social Security—the Old Age, Survivors and Disability Insurance (OASDI) program—does more to secure family incomes and reduce poverty than any other policy or program, public or private. In addition to ensuring a measure of dignity and self-sufficiency in retirement and old age, Social Security protects against other life-altering events—including the death or disability of a worker, spouse, or parent.

As a social insurance program, Social Security is predicated on the idea that society is inherently interdependent—parents nurturing children, younger generations caring for their predecessors, and the healthy providing for the infirm. Indeed, as this entry emphasizes, Social Security is best understood as a program that protects citizens and cohorts across the entire life course.

After defining several terms, the progression of this legislation since its inception in 1935 is reviewed. The benefits and costs of Social Security are then discussed, including its economic impact for elderly, disabled, surviving, and child beneficiaries. Next, this entry describes the program's financing problem and discusses the use of declarations of *crisis* to advance an ideological position that supports privatizing the program. This entry observes that relative to other industrial nations, the United States is better positioned to expend resources on its public retirement pension programs. Finally, this entry concludes by noting that there are many reasonable options for addressing the projected financing problem and by highlighting the need for interventions to further strengthen protections across the course of life, an area likely to be of special interest to life course researchers.

## SOCIAL INSURANCE AND SOCIAL SECURITY DEFINED

Individuals and families in all societies are subject to economic risks such as unemployment, illness, disability, retirement, divorce, and more. In all societies, risks are addressed through some mix of private (family, savings, private insurance, charity, employment-based health care, and pensions) and public (welfare, social insurance, and government mandates) mechanisms. Social insurance is one very important approach to protecting against identifiable risks that could overwhelm the finances of individuals and families. Whereas welfare programs give immediate relief to extreme financial problems, social insurance programs in the United States—including Medicare, Social Security, unemployment insurance, and worker's compensation—seek to *prevent* financial distress. Built on the principle of universal coverage, social insurance provides a social means of pooling risks. Using insurance principles, the costs and risks of coverage are spread across a broad population. (In the case of Social Security, the risk is spread across all working Americans.) In exchange for modest work-related contributions over many years, social insurance provides a floor of protection against predictable risk (Ball, 2000).

Unlike private insurance plans, social insurance plans do not "cream off" the best risks and try to keep the most expensive risks out of their insurance pools. To the contrary, because social insurance programs seek to provide widespread basic protection, they embrace all citizens and try to assure a basic level of security. Hence, whereas profit-driven private health insurance often seeks to exclude persons with serious illnesses, a social insurance system seeks their inclusion. Because social insurance systems do not exclude bad risks, it is essential that the participation be mandatory to maintain a financially viable system. Also, the participation of the entire workforce prevents those who might opt out from eventually having to be rescued by taxpayers through welfare programs (Ball, 2000). Benefits eligibility is earned through a worker's payroll tax contributions. Hence, benefits are considered an earned right, another factor supporting the dignity of beneficiaries and the political stability of social insurance programs.

In other national contexts, Social Security often refers to a system of social insurance, public assistance (welfare), and related social interventions. In the United States, Social Security commonly refers to OASDI, the program that provides cash benefits to retired, disabled, and surviving and other family members and is sometimes used to describe Medicare programs. Except when otherwise indicated, in this entry the term is used to refer solely to OASDI. Social Security also represents an ideal, a value to be achieved by a civilized society seeking to provide widespread basic protection against what Franklin D. Roosevelt (1882–1945) called "the vicissitudes of life." Indeed, the OASDI program, as the next section highlights, is rooted in such a vision.

## HISTORY

Faced with unprecedented economic dislocation, President Roosevelt and the New Deal reformers of the 1930s saw the need and opportunity to prepare an economic security bill that would address unemployment and old-age insecurity. With Roosevelt's popularity boosted by the early successes of the New Deal, in 1934 he established the Committee on Economic Security. Chaired by Secretary of Labor Frances Perkins (1882–1965), the Committee on Economic Security report served as the basis for the Social Security Act of 1935, which established two social insurance programs, three income-tested welfare programs, and several public health and social service programs. In a January 17, 1935, message to Congress, Roosevelt commended the Committee on Economic Security proposals to Congress as a plan that "is at once a measure of prevention and a method of alleviation":

> We can never insure one hundred percent of the population against one hundred percent of the hazards and vicissitudes of life, but we have tried to frame a law that will give some measure of protection to the average citizen and his family.... This law, too, represents a cornerstone in a structure which is being built but is by no means complete. (American Rhetoric, 1935)

That final sentence, of course, is critical—the Social Security Act represents a structure to be built on and, by inference, to further extend protections against many of the unprotected risks citizens encounter over their lives. Following enactment, a favorable political consensus prevailed allowing the incremental expansion of Social Security and related programs from 1939 through the mid-1970s.

**Incremental Expansion** Benefits were extended in 1939 for the wives of retired workers and for the surviving wives and children of deceased workers. These survivor benefits were made available to men in 1950. The 1950 amendments to the Social Security Act established social insurance as the nation's dominant means of protecting older Americans against loss of income in retirement. Coverage was extended to regularly employed domestic and farm workers and benefits increased, assuring that Social Security benefits would generally be more available and of greater value than benefits provided through the federal-state welfare program for the aged funded under the original Social Security Act.

In 1956 disability insurance protections for permanently and severely disabled workers ages 50 to 64 were added, eventually extending to all workers under age 65 in 1960. The 1956 amendments also gave women the right to accept permanently reduced retired workers benefits between ages 62 and 64, an option extended to men in 1961. The high rate of poverty—an estimated 39% in 1959—and those near poverty among the old combined with a growing economy to provide political rationale for substantial benefit increases from 1965 through 1972. In 1972 an automatic annual cost-of-living allowance was incorporated into the law, a provision that ensures that benefits, once received, maintain their purchasing power from year to year. Although critically important for helping to stabilize the incomes of the old, disabled, and surviving family members, this provision made the financing of the program more sensitive to economic change (Berkowitz, 1991).

**Financing Problems Emerge** Conservatively financed and carefully monitored, Social Security and Medicare are the only federal programs whose anticipated revenues and expenditures are projected out to 75 years in the future. These projections provide an early warning system so that policy makers can make needed adjustments in a timely manner. The financial stability of Social Security rests on the authority and taxing power of government. This power is reinforced by the self-interest of political leaders, protecting the promised benefits, and assuring the program's continuity and financial integrity (Kingson, in press). Moreover, an implied covenant, arising from a deeply embedded sense of mutual responsibility in civilization, reinforces and underlies "the fundamental obligations of the government and citizens of one time and the government and citizens of another to maintain a contributory social insurance system" (Brown, 1977, pp. 31–32).

From time to time, financing problems emerge requiring legislation, with the last major ones occurring in the mid-1970s and early 1980s. Another financing problem is on the horizon, due to a number of factors, including the aging of the baby boomers, the erosion of the payroll tax base due to growing income inequality, increases in life expectancy at age 65, and the long-term declines in birth rates since the 1960s. Fortunately, the Social Security financing problem is less problematic than the previous one.

## UNDERSTANDING BENEFITS AND COSTS OF SOCIAL SECURITY

A cross-sectional (i.e., *time-freeze*) perspective may present a different picture of the benefits and costs of Social Security than a perspective that views the transfers Social Security structures over time (i.e., a longitudinal perspective). For example, at one point in time Social Security can be understood primarily as a program that taxes the young to pay for retired older Americans. However, viewed over time, there is a reciprocity of giving and receiving, such that workers at one time make payroll tax contributions to support current beneficiaries with the promise and expectation that the same will be done for them and their family members when they achieve eligibility. Similarly, those receiving benefits are either disabled or retired, or else they are spouses or young dependents of retired, disabled, and deceased workers—each of whom have made contributions into the program and helped to build the economy during their active work lives (Kingson, Hirshorn, & Cornman, 1986.).

Social Security affects virtually all Americans, as taxpayers and as beneficiaries, covering 165 million workers and their families and providing benefits each month to 50 million beneficiaries in January 2008—including 31.7 million retired workers, 2.4 million spouses of retired workers, 4.4 million aged widow(er)s, 7.1 million disabled workers, 152,000 spouses of disabled workers, 153,000 spouses of deceased workers caring for dependent children, and—what most people are surprised to learn—4.1 million children. In 2008, 3.3 million of these children were mostly under age 18 and the dependents of disabled, deceased, and retired workers. However, there are another 800,000 severely disabled adult children, also dependent on disabled, deceased, and retired workers, whose developmental and other severe disabilities began before age 22. Contrary to what many people believe, working persons do not pay into a personal saving account that determines the benefits that they and their families receive. Rather, the Social Security Administration maintains a record for each worker of earnings subject to the payroll tax. This earnings history is used to determine eligibility and benefit amounts.

## THE BENEFITS

Monthly Social Security benefits are not huge, nor are they insignificant. In January 2008, the maximum monthly benefit for persons first retiring at age 65 was $2,030. Average monthly benefits in January 2008 were as follows:

- Retired worker alone: $1,066
- Aged couple with both receiving benefits: $1,761
- Widowed mother and two children: $2,221
- Aged widow(er) alone: $1,040
- All disabled workers: $1,004
- Disabled worker, spouse, and one or more children: $1,761
- Children of deceased workers: $936

Social Security benefits are based on a progressive benefit formula, structured to assure that people who work consistently at low and modest wage levels receive a substantially larger rate of return on their payroll tax payments (roughly twice the size) than those with substantially higher earnings. Benefits to low-wage earners replace about 54% of their average lifetime earnings, adjusted to capture changes in standards of living over the life of workers. This amount decreases to 40% for individuals earning average wages and 28% for workers whose earnings are nearer to the program's maximum taxable income (National Academy of Social Insurance, 2008). In providing larger returns to lower-income workers, the benefit structure recognizes that these workers may have limited access to private savings accounts and employer-based pension plans.

There is of course much more to know about Social Security benefits than this overview provides, much of it quite complex, as seen below:

- Covered workers may accept reduced retirement benefits when they turn 62 or monthly benefits that are about 5 to 7% larger for each year their receipt of benefits is postponed, up until age 70.
- Full retirement age—66 for workers born from 1943 to 1954—is scheduled to gradually increase to age 67 for workers born in 1960 or later.
- Severely disabled workers are eligible to receive monthly benefits if their condition meets the disability eligibility criteria.
- Special rules apply to the timing of benefit receipt for widows and spouses of retired workers.
- Under special circumstances, grandchildren and severely disabled widow(er)s between the ages of 50 and 59 can be eligible for benefits.

Although the above are the most obvious and direct benefits of Social Security, the program's indirect benefits should not be overlooked. In underwriting the economic security of the old, the program frees up middle-aged adult children to devote more resources to their young children. A joining institution, it is based on and gives expression to important values widely shared in America—the idea that people have responsibilities to honor their parents and protect their families, their neighbors, and themselves. As former Senator Bill Bradley (b. 1943) once observed, Social Security is arguably the best expression of community in America.

**Economic Impact across the Life Course** Few recognize that Social Security is the foundation of most families' retirement, disability, and life insurance protection and that it provides protections across the entire course of life (Herd & Kingson, 2005). Ask most Americans to envision a recipient of Social Security and the prevailing image would most likely be of an elderly person in their twilight years, enjoying retirement supported by the Act's cash benefits. Although it is true that Social Security has transformed old age in America, it is important to not discount the impact of Social Security on the 30% of recipients (and their family members) who are not retired workers. Some examples are given below:

- Social Security does more than any other federal program, with the exception of the Earned Income Tax Credit, to reduce poverty among children, lifting 1.3 million out of poverty (Lavery & Reno, 2008).
- A 30-year-old worker earning around $30,000 holds Social Security life insurance protection for her or his spouse and two young children with a present value of $443,000 and disability protections insurance protection equivalent to $414,000.
- Soldiers fighting in Iraq and Afghanistan and virtually all working adults are covered by Social Security. If they are disabled, they receive benefits, as do their dependents and their families if they die.
- Without Social Security benefits, 55% of the 7.1 million severely disabled workers and their 153,000 spouses would live in poverty.
- Social Security is the foundation of the nation's retirement income system. It is the only pension protection available to 6 out of 10 private-sector workers (Ball, 2000).
- Without Social Security, the poverty rate among the old would increase to nearly 50%.

Because its benefits are based on a progressive benefit formula, Social Security is particularly important for low- and moderate-income households with persons ages 65 and over (see Table 1) and also for older women and minority populations:

- For the bottom 60% of the elderly income distribution—those 16.2 million households with incomes under $25,587 in 2004—Social Security provides over 70% of all household income.
- Social Security provides 90% of household income to approximately 54% and 62% of African American and Hispanic unmarried seniors, respectively (National Academy of Social Insurance, 2008).

The security of beneficiaries is protected by annual cost-of-living protection, which assures that benefits, once received, maintain their purchasing power into advanced old age. Indeed, the program's adequacy features—the

| All members over age 65 | QUINTILES | | | | | |
|---|---|---|---|---|---|---|
| | All Aged Units | Units Under $10,399 (Q1) | $10,399–$16,363 (Q2) | $16,363–$25,587 (Q3) | $25,587–$44,129 (Q4) | $44,129 and over (Q5) |
| Number of units (in millions) | 27.0 | 5.3 | 5.5 | 5.4 | 5.4 | 5.4 |
| Percent of Total Income From: ** | | | | | | |
| Social Security(OASDI) | 38.6 | 82.6 | 83.4 | 66.6 | 47.5 | 18.9 |
| Railroad retirement | 0.5 | 0.3 | 0.4 | 0.6 | 1.0 | 0.3 |
| Government employee pension | 9.0 | 0.8 | 2.1 | 5.5 | 10.4 | 9.9 |
| Private pension/annuity | 10.2 | 0.7 | 2.2 | 6.0 | 10.1 | 10.9 |
| Income from assets | 12.6 | 2.3 | 3.8 | 6.0 | 8.4 | 17.8 |
| Earnings | 26.3 | 1.2 | 2.8 | 7.1 | 15.7 | 40.1 |
| Public assistance (welfare) | 0.6 | 8.4 | 1.6 | 0.9 | 0.2 | 0.1 |
| Other | 2.4 | 2.0 | 1.5 | 2.7 | 2.6 | 1.9 |

* All members of households are 65 or over. Aged units are married couple living together—at least one of whom is 65—and nonmarried persons 65 or older.
** Details may not sum to totals due to rounding error.

SOURCE: Social Security Administration (2006).

***Table 1.*** *Importance of various sources of income to elderly households (aged units), 2004*.* CENGAGE LEARNING, GALE.

desire to provide widespread protection and do a bit more for those who have worked many years but at low wages—have driven its success.

This is not to suggest that the economic security of the old cannot be improved. Despite the successes Social Security has had in maintaining living standards and alleviating poverty among elderly populations, specific groups are still vulnerable—specifically women who are very old, those who are unmarried or divorced, and elderly African American and Hispanic populations. For example, although only about 10% of those 65 and older live below the federal poverty level (U.S. Census Bureau, 2006), closer examination reveals the following:

- Median household income declines as women age, dropping from $16,474 for those ages 65 to 69 to $13,172 for women 75 and older—a 20% drop between these age groups and, alarmingly, 63% and 55% lower than men in the same age ranges (He, Sengupta, Velkoff, & DeBarros, 2005).
- Nineteen and a half percent of Hispanics (men and women) and 23.7% of African Americans, 65 and older fell below the poverty line in 2006, compared to 8.8% of Caucasians (He et al., 2005).
- Forty and four-fifths percent of Hispanic and 40.3% of African American women 65 and older who are living alone fall below the poverty line, compared to 16.9% of non-Hispanic White women over 65 and living alone (He et al., 2005).

There are myriad reasons for the elevated percent of poverty among elderly women, including the persistent gender gaps in wages, societal expectations that women will leave work to perform caregiving duties (for both children and aging parents), and lower rates of private pensions and savings compared to men (National Organization for Women Foundation [NOW], 2007). Many women rely on the spouse or survivors benefits to augment their Social Security—specific benefits provided to spouses after 10 years of marriage—helping to reduce the percentage of poverty among married women to 3% compared to 15% of unmarried women (NOW, 2007). Due to higher divorce rates, resulting in shorter marriages and a lower number of women marrying, it is estimated that the percentage of poverty among unmarried women will grow over time (NOW, 2007). Although Social Security has done much to underwrite the economic security of individuals and families across the course of life, policy makers and life course researchers should not lose sight of groups that remain at risk.

### THE COSTS OF SOCIAL SECURITY

Current benefits are funded primarily from the taxes paid by current workers, with the promise that current workers will themselves receive benefits when they become eligible. Employed persons contribute 6.2% of their gross earnings (with an equal employer match) up to a maximum taxable ceiling ($102,000 in 2008) into two trust funds—the Old Age and Survivors Insurance and Disability Insurance, or what is more conveniently referred to as the combined OASDI trust fund. Self-employed persons make contributions equivalent to those made by regularly employed persons and their employers. The maximum taxable ceiling is adjusted yearly for changes in average wages. The goal is for Social Security to receive a constant share of national earnings. Additional revenues

come from treating a portion of Social Security benefits as taxable income and from the interest earned from investing the growing OASDI trust fund assets in government bonds.

In calendar year 2007, the combined OASDI trust fund received about $780 billion from all sources—$652 billion from payroll tax revenues, $17 billion from treating Social Security benefits as taxable income, and $101 billion in interest payments for treasury bonds and other federal securities held by Social Security trust funds. In turn, $591 billion were expended—$582 billion on benefit payments, $3.9 billion on the portion of the railroad retirement program that is essentially part of Social Security, and $5.5 billion on administrative expenses. Social Security is one of the most efficient federal programs with less than 1% (0.9%) of trust fund revenues spent on administration (Board of Trustees, 2007).

**The Politics of Social Security Financing** Unlike the mid-1970s and early 1980s, Social Security does not face an immediate risk of taking in less revenue than it needs to expend within the next few years, nor is it likely to within the next 20 to 25 years, even if Congress takes no action (Altman, 2005). However, a significant long-term problem is projected by Social Security's actuaries and its Board of Trustees.

The most commonly accepted estimates suggest that OASDI has sufficient funds to meet all obligations until 2041. Outlays are projected to exceed tax revenues (payroll tax receipts and taxes on benefits) in 2017. However, income from all sources, including interest on trust fund investment, is projected to exceed expenditures through 2027. After that, timely payment of benefits will require drawing down the OASDI assets, depleting them after 2041. Of course, the size of the actual problem could grow or shrink, depending on economic and demographic changes (Board of Trustees, 2007).

Even if Congress failed to act before 2041, Social Security's dedicated stream of income after 2041 would be sufficient to pay about 78 cents of every dollar promised over the remaining 75-year estimating period. In other words, trust fund depletion—although it would be a disaster for the politicians—would not mean that Social Security would cease to pay any benefits.

Theoretically, the financing problem could be addressed immediately by raising the Social Security payroll tax on employers and employees from 6.2% to 7.2% or by immediately reducing all future benefits by about 14%. No one seriously advocates either approach, but it does provide a very rough indication of the size of the financing problem. Moreover, relative to other industrial nations, population aging is not placing the United States under excessive pressure and Americans are not heavily taxed even though their per capita income is among the highest, $34,681 in 2000 U.S. dollars, as compared to the equivalent of $25,056 in France, $24,215 in Germany, and $28,030 in the United Kingdom (Organisation for Economic Cooperation and Development [OECD], 2007).

Comparative data published by the OECD (2007) indicate that in the early 21st century there are approximately 21 persons ages 65 and over in the United States per 100 persons of working age, compared to 26 in Germany, 28 in France, 29 in Italy, 28 in Japan, 27 in the United Kingdom, and 30 in Sweden. By 2030, when the youngest of the U.S. baby boomers will reach age 65, this elderly dependency ratio will grow to 37 per 100 in the United States, 39 per 100 in France, 49 per 100 in Germany, 48 per 100 in Japan, and 39 per 100 in the United Kingdom. Other nations carry much higher tax burdens than the United States. For example, federal expenditures, as a percent of gross domestic product, are generally much lower than other OECD nations—16.2% in 2003, compared to 28.7% in France, 27.6% in Germany, 24.2% in Italy, 31.3% in Sweden, and 20.1% in the United Kingdom (OECD, 2007). In short, compared to their major trading partners, the United States is better positioned to make adjustments in its public pension system (i.e., Social Security).

Even so, the existence of a long-term financing problem has served as a vehicle for those who disagree with the social insurance approach to argue for dramatic change. Persistent claims that Social Security is unfair and unsustainable (Peterson, 1996), a previously soaring stock market, and anxiety about the future of the program has undermined faith in the program, especially among young adults (Altman, 2005).

George W. Bush (b. 1946) seized on these concerns in the 2000 U.S. presidential election and throughout his two terms, proposing that a portion of payroll taxes be diverted to individual accounts, with some hoping that this might be the first step to a fully privatized system. He favored a more "market approach as a 'solution' to Social Security's financing troubles. Individual accounts would not only cure Social Security's bankruptcy blues, they would allow Americans more choice, increase savings, and bigger returns on their retirement investments—all while making the program more equitable for women and minorities" (Herd & Kingson, 2005, p. 188). Those advocating partial privatization did not emphasize how the diversion of payroll taxes into private accounts would actually make the projected shortfall much worse and require huge reductions in benefit guarantees, especially for the young (Diamond & Orszag, 2005).

As it became clear that the traditional Social Security program and its benefits were threatened, strong opposition

built up. Ultimately, public education, a stagnant stock market, and concerns about how privatization proposals would grow the federal debt all combined with the declining favorability ratings of the president to, once again, shift the politics of Social Security. By 2007 proposals to partially privatize Social Security were no longer politically viable. Nonetheless, as previously discussed, a real financing problem exists. To address public concern and to provide lead time for the public to adjust to whatever changes need to be made, this financing problem will need to be addressed before too many years pass.

## CONCLUSIONS

In a speech given on June 30, 1961, John F. Kennedy (1917–1963) stated the following about some realities of Social Security: "A Nation's strength lies in the well-being of its people. The social security program plays an important part in providing for families, children, and older persons in time of stress, but it cannot remain static. Changes in our population, in our working habits, and in our standard of living require constant revision" (Social Security Administration, n.d.).

In the early 21st century, Social Security policy discussion reflected deep divisions in the philosophy of the extent to which the individual versus the national community should bear the risk of preparing for their retirement, disability, or survivorship—with the Bush administration seeking to move the program toward a more individualistic, privatized model and the traditional supporters of the social insurance approach successfully fending off this effort.

At some point in the next 20 years, preferably sooner rather than later, attention will turn toward addressing the projected financial shortfall in Social Security. Simultaneously, serious attention also needs to be directed at how to strengthen benefits for today's and tomorrow's young and old, especially those remaining at significant economic risk. Along with many others—some liberal, some conservative, and some moderates (Altman, 2005; Ball, 2006; Diamond & Orszag, 2005; Schulz & Binstock, 2006; Steuerle & Bakija, 1994)—the authors conclude with two broad assertions:

- The financing problem may be addressed in several different ways without radically altering the program's basic commitments and structure. For example, Social Security trust fund investments could be diversified, allowing for a small portion of the trust fund assets to be invested by an independent board in a broad selection of private equities and larger returns from trust fund investments. The ceiling on wages subject to the payroll tax—now only 84% of all earnings—could be restored to cover 90% of earnings, as was the case in 1983 following the last major financing reform. Small increases in payroll taxation (e.g., by 0.25% on employee and employer in 2040) could be scheduled 30 or more years in the future. Retirement ages can be further adjusted or the benefit formula trimmed to reduce benefits for the most well-off. Plainly, there will be no pain-free solutions. What is important to recognize is that there are many ways to put together a financing reform that does not undermine the social insurance approach.
- Consideration should also be given to selective expansions of protection by, for example, reducing the minimum length of marriage from 10 to 7 years to assist divorced spouses to qualify for spousal and survivor benefits (NOW, 2007); adjusting the special minimum benefit formula to improve the adequacy of benefits for low-wage workers who have been in the labor force many years (Reno, 2007); implementing a one-time benefit increase at age 85 to protect the very old, a group still at significant economic risk (Reno, 2007); and restoring student benefits for surviving children, ages 18 to 21 (Reno, 2007).

This entry has emphasized that Social Security is best understood as "a work in progress" whose purpose is to provide widespread basic economic protection against risks to which all Americans are subject in the course of their lives. Life course research and scholarship has much to contribute to the understanding of the benefits, costs, public perceptions, and even politics of Social Security and the implications of change for tomorrow's elders, workers, and children.

**SEE ALSO** Volume 3: *Intergenerational Transfers; Pensions; Policy, Later Life Well-Being; Retirement.*

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# SOCIAL SELECTION-CAUSATION DEBATE

The life-course perspective focuses on temporal components of individual biography, investigating how lives unfold over many years. As a consequence, life-course scholars are often interested in how differences arise between social groups, particularly in the later years (Dannefer, 1987; O'Rand & Henretta, 1999). Studies of inequality in later life, however, are often challenged by a methodological and theoretical conundrum: Are differences between groups caused by some intervening event/factor, or do individuals end up in particular social groups because of their preexisting characteristics? This is the essence of the social causation–social selection debate and is central to social scientists' understanding of the temporal dynamics of the life course and the origins of later-life inequality.

## DEFINING SOCIAL CAUSATION AND SOCIAL SELECTION

The temporal orientation of the life-course perspective means that later life must be studied in relation to other periods of the life span, tracing connections across individuals' lives (Settersten, 2006). To study these temporal relations, life-course scholars conceptualize individuals' biographies in terms of transitions and trajectories. *Transitions* represent relatively discrete changes in roles or statuses, for example, starting a new job or getting married; *trajectories* denote sequences of transitions—or long-

term patterns of stability and change—in these roles or statuses, such as a work career or marital history. Thus, scholars interested in understanding the origins of inequality have often looked to transitions as differentiating membership between social groups and how these groups differ on some outcome trajectory (e.g., income, health, education, marital stability). There is considerable debate, however, as to whether experiencing a transition and belonging to one social group versus another represents a cause or effect of disparate life experiences.

In the most simplistic sense, individuals who experience a given transition become members of a group, whereas those who do not experience that transition are not members of the group. Thus, if members of these groups differ from one another on some outcome, one might conclude that the transition that defined the groups caused the difference. This is known as *social causation*. Differences between two social groups, however, do not necessarily reflect the effect of group membership, because individuals do not randomly experience transitions or randomly become members of one group versus another. Therefore, some of the identified "consequences" of a given transition and associated group membership may merely represent a continuation of a trajectory that predated the transition and may have in fact contributed to the experience of that transition itself. That is, differences among individuals may put them at different risks of experiencing a transition, of becoming a member of one social group versus another. Thus, individuals may self-select or drift into certain groups. This is known as *social selection*. A prominent example from the research literature helps to illustrate these concepts.

## AN EXAMPLE OF SOCIAL CAUSATION AND SOCIAL SELECTION: MARRIAGE AND HEALTH

A large body of research documents that married individuals have better health in later life than individuals who are not married. Married persons rate their health more favorably, have better objective physical and mental health, and have lower mortality risks than divorced, widowed, or never-married persons (Waite, 1995; Waite & Gallagher, 2000). It may be that something about being married *causes* better health. It also is possible, however, that people in better health are more likely to get and stay married; that is, they are *selected* for marriage and would have had good health whether they were married or not.

Studies that support the social causation perspective theorize that marriage is a social institution that promotes and maintains good health through a number of different mechanisms (Waite, 1995). Marriage provides access to the emotional and social support of a spouse and increases social ties to others. Married people, in some respects, lead more orderly, regimented lives than the unmarried, getting more regular sleep, balanced meals, and physician visits, which promotes their health and well-being (Umberson, 1987). Moreover, marriage curbs negative health behaviors, as the level of alcohol and drug use declines among individuals once they marry. Married persons also have higher incomes and accumulate more wealth than their unmarried peers, which permits the purchase of more and better quality health care, a benefit that is especially important for women and racial/ethnic minorities (Waite & Gallagher, 2000). Thus, because married individuals have access to social support and wealth, and because they engage in behaviors that are health promoting, health differences between the married and nonmarried are *caused* by the former group being married. An important caveat to this discussion is that marriage may be beneficial for health only when the relationship is of high quality (Hawkins & Booth, 2005).

As noted previously, however, healthier individuals may be more likely to experience the transition into marriage in the first place, and differences between the married and nonmarried may represent social selection. Studies supporting this perspective find that personal characteristics increase both the likelihood individuals will marry and that they will have good health. Socioeconomic status is an often-identified selection agent, because more educated persons—who have better health behaviors and greater earnings that permit purchase of high-quality health care—are more likely to get and remain married. Thus, people with characteristics associated with better health are more likely to be *positively selected* into marriage. Similarly, individuals with characteristics associated with poor health are less likely to get and remain married. For example, less educated people are less likely to marry and, if they do marry, are more likely to divorce, in part because financial problems are a leading cause of marital discord. Likewise, individuals with alcohol and drug problems and those prone to conflict or with psychiatric problems are also less likely to get married and, if they do marry, more likely to divorce (Waite, 1995). Less educated individuals and those with fewer socioeconomic resources are also more likely to become widowed because their spouses are more likely to die at younger ages. Individuals with these and other characteristics that undermine health are said to be *negatively selected* for marriage.

Reconciling which side of the social causation–selection debate is supported by the weight of the empirical evidence is complicated by differences in the samples and measurement and analytic techniques across studies. Nevertheless, there appears to be more support for the social causation hypothesis; that is, being married causes

good health. Accounting for differences in socioeconomic status generally does not eliminate the greater health and lower mortality of the married, as would be expected if social selection was operating. Although such prior studies are suggestive, it is difficult to assess directly whether people in good health are selected for marriage, because most existing longitudinal data sets do not have measures of health prior to marriage. One exception is a study that used historical data on male undergraduates at Amherst College to test whether men with beneficial health profiles were more likely to marry and how their mortality experiences differed from those who did not marry (Murray, 2000). Men with favorable health profiles at admission to college were more likely to get married, consistent with the selection hypothesis. Even after controlling for health in early adulthood, however, married men had lower risks of mortality than unmarried men—a finding supporting the social causation hypothesis. Thus, although one cannot deny that some social selection is operating (at least for men), being married causes individuals to accrue additional advantages that promote the maintenance of good health and well-being.

## SOCIAL CAUSATION AND SOCIAL SELECTION AS LIFE-COURSE PROCESSES

Although social causation and social selection are often presented as competing hypotheses for the origins of inequality between groups in later life, both hold validity as explanations of later-life inequality. Thus, in some respects, the social selection–social causation debate is frequently a false debate; both social causation and selection processes can be operating—albeit at different points in the life course. Social selection processes often occur early in the life course, when individuals nonrandomly experience transitions that anchor their position in adulthood, whereas social causation processes are predominant in mid- and later life. The temporality of these processes is evident from the example of marriage and health, but prior research has documented a number of other instances, including the relationships between adolescent pregnancy and low socioeconomic status (Hoffman, Foster, & Furstenberg, 1993), premarital cohabitation and the risk of divorce (Lillard, Brien, & Waite, 1995), and religious participation and family relations, health, and delinquency in adolescence (Regnerus & Smith, 2005).

Indeed, the temporal orientation of the life-course perspective is attractive precisely because it permits theoretically different mechanisms to be operating at different points in individuals' lives. For example, concerning the relationship between adolescent pregnancy and low socioeconomic status, prior studies have found that girls from impoverished backgrounds are more likely to become pregnant and give birth as adolescents (*selection*), whereas in midlife these adolescent mothers have slightly lower socioeconomic standing compared to women from similar backgrounds that did not experience an adolescent birth (*causation*; Hoffman et al., 1993).

Although discussion of social causation and selection often concerns differences between two discrete groups, this discussion can be extended to consider how trajectories dynamically interact with one another across the life course. That is, the development of one trajectory may influence the simultaneous development of another. For example, a consistent finding across studies is that individuals in disadvantaged economic circumstances—those with low levels of educational attainment, low incomes, less wealth, and unstable work histories—have worse health outcomes than those in better circumstances (Mulatu & Schooler, 2002; Smith, 1999). The social causation hypothesis is that socioeconomic status influences the development of health over time, because persons with fewer resources are less able to avoid threats to health (e.g., infection, poor working conditions) and have less access to health care services to deal with these threats.

The social selection hypothesis, by contrast, is that persons in poor health are less likely to complete their education and less able to be regularly employed, which limits their ability to earn and accumulate financial resources. Poor health also increases medical expenses and thereby depletes savings. Again, whereas individuals in poor health are selected into lower socioeconomic strata, primarily in early life, prior studies overwhelmingly demonstrate that socioeconomic trajectories also influence health trajectories, especially in mid- and later life (Mulatu & Schooler, 2002).

## RESEARCH CHALLENGES

Although a good deal of progress has been made in examining social causation and selection hypotheses on a variety of topics, several research challenges remain in examining these issues in later life. Perhaps foremost among these challenges is the general absence of longitudinal data spanning the lives of individuals from early childhood into old age across a number of birth cohorts. The absence of such longitudinal data is problematic because many years often precede the measurement of the presumed causal agent, and many years intercede the observation of hypothesized outcomes. Although the discussion of social causation and selection is often a theoretical one, longitudinal data are necessary to disentangle how hypothesized causation and selection processes generate later-life inequalities. Many longitudinal studies, such as the Health and Retirement Study (HRS), are age-bounded, sampling individuals in mid- and later life

when selection processes have already left their imprint on individuals' life experiences. Even the most sophisticated statistical techniques cannot compensate for the absence of information earlier in the life course, and studies that pool data across cohorts to simulate trajectories confront additional methodological problems.

The temporal orientation of the life-course perspective highlights the need to move beyond age-specific studies toward more integrated data collection efforts that permit the prospective measurement of individuals' choices and decisions across the life span (Elder, Johnson, & Crosnoe, 2003; Settersten, 2006). Accordingly, as panel studies of younger individuals, such as the National Longitudinal Study of Adolescent Health (Add Health), mature, they will provide additional leverage to understanding how life-course processes generate inequalities among older individuals.

Although such long-view data sets are ideal, the time and financial resources required to collect and store such data for studies of later life are immense, and ongoing data collection efforts, such as Add Health, remain many years from being able to study later-life outcomes directly. As a result, age-specific studies focused on older adults such as the HRS are likely to remain a substantial source of research in the coming decades (Settersten, 2006). It is important to recognize that another type of social selection further challenges social scientists' ability to understand the mechanisms that generate later-life inequalities: *selective mortality* (George, 2005). Simply put, many of the most socially and economically disadvantaged persons in the population do not live long enough to be eligible for inclusion in studies that begin observation in mid- and later life (George,2005).

Thus, analyses of life-course processes are *conditional* on survival to older ages, representing a limited range of experiences, and potentially fail to detect social selection, as well as sequential inequality and divergent causal processes (see, for example, Willson, Shuey, & Elder, 2007). Studies that aim to document the origin of differences between social groups may be limited in their ability to do so because the greater risk of mortality for one group may serve to make the two groups appear more similar over time. Rather than being a solely methodological issue, selective mortality has theoretical implications: Selective mortality introduces an additional life-course process and associated substantive questions that must be examined (George, 2005) because it undermines researchers' ability to test empirically life-course theories and hypotheses concerning social causation and selection.

**SEE ALSO** Volume 2: *Health Differentials/Disparities, Adulthood; Social Class;* Volume 3: *Marriage, Later Life; Mortality; Self-Rated Health.*

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# SOCIAL SUPPORT, LATER LIFE

Social relationships are extremely important for survival and well-being across the life span. Émile Durkheim (1897/1951) made this important observation in his

sociological study of suicide, which revealed that social isolation or the lack of social integration was associated with increased suicide risk. Many theorists believe that social relationships are important for survival and health because of the support they provide. Social support is a broad construct that includes different types and qualities of support. In general, social support includes the help and sense of belonging people receive from their social ties (e.g., spouse, children, and coworkers), and it is an important contextual factor that influences health. Social support is particularly central for successful aging as people become more invested in their social networks and rely on them for help. There are several important themes or debates in this area that will be highlighted in this entry: (a) How does one determine when a social relationship or interaction is supportive? (b) Do individuals perceive social relationships and interactions differently, and what accounts for those differences? (c) How and why are social relationships important for health? This entry will first provide a definition and measurement of social support followed by a summary of research on the predictors and implications of social support for health. Finally, new and future areas of research will be outlined.

## DEFINITION AND MEASUREMENT OF SOCIAL SUPPORT

First, in order to understand whether a relationship or interaction is supportive, it is important to know how social relationships and support are defined. The convoy model of social relations, developed by the psychologists Robert L. Kahn and Toni C. Antonucci in 1980, provides a useful framework for understanding social relationships and support across the life span. According to this model, individuals are accompanied by "convoys" of close social partners who provide support as well as irritations across the life span. The term *convoy* is also referred to as a "social network." The convoy or social network usually includes one's spouse, other immediate family (parents, children, siblings), and best friends.

These social convoys are distinguished by structural as well as functional qualities. Structural aspects of the convoy refer to factors such as number of relationships, whereas functional aspects include perceived support and the positive as well as negative qualities of relationships. Personal (e.g., age, gender, race) and situational (e.g., role expectations, resources, demands) factors influence structural and functional aspects of the convoy, which, in turn, affect the individual's health and well-being. Researchers have consistently found that functional aspects of support are more important than structural aspects in affecting well-being. In addition, negative aspects of relationships are more highly associated with well-being than are the positive aspects, perhaps because they occur less often and are consequently more salient.

Thus, whereas social networks refer to the structural aspects of social relationships, social support refers to the content and quality of social relationships. Support is defined as an interaction that involves aid, affect, or affirmation. Aid is defined as informational and instrumental support. Informational support, for example, involves the practical advice and information individuals receive from others. Instrumental support refers to activities such as helping with finances and activities of daily living such as getting groceries and driving. Affect involves emotional support, which includes the love, care, and affection a person receives from others as well as their willingness to listen when the person has troubles. Affirmation refers to a sense of belonging and being accepted by others.

Because support can be interpreted in so many ways, researchers introduced the concept of relationship quality, which is the evaluation of relationships as positive and/or negative. Positive aspects of relationships include feeling loved, cared for, and understood, for example. In contrast, negative aspects of relationships include demands, criticism, unsolicited advice, and the like. In addition, supportive behaviors can at times be interpreted negatively. For example, certain types of support may be interpreted as overprotective or unwanted, and may increase feelings of dependency.

A relatively new area in the social support research that is gaining momentum is the field of ambivalence. While social support literature traditionally examined positive relations to the exclusion of negative or examined positive and negative qualities separately, this area of work recognizes that the same relationship can have both positive and negative qualities. Ambivalence refers to having both positive and negative sentiments about the same relationship. For example, spouses may view one another as extremely supportive but also highly irritating. Researchers have found that ambivalent feelings are normative in close social ties, especially among spouses and in the parent–child relationship.

Another aspect of close social ties gaining increased attention includes social control. Researchers define social control as the indirect and direct ways that close social ties control an individual's health behaviors. For example, relationships may encourage healthful behaviors such as exercise or discourage unhealthful behaviors such as smoking. Indirect social control occurs because relationships involve responsibilities and role obligations that may discourage self-destructive behaviors. Direct social control involves explicit persuasion or sanctions. Social control is considered different from support because although it may lead to improvements in health, it may

not be considered supportive. Social control is particularly important to examine in older adulthood because older adults often experience chronic health problems that demand changes in health behaviors.

The measurement of support is particularly complicated because support includes not only several types of interactions but also subjective perception. For example, a gesture that is interpreted by one individual as supportive may be interpreted by another as intrusive. The interpretation of support depends on who is receiving the support, the type of support provided, the context in which the support is given, and who is providing the support. Support can be measured as support actually received or perceived to be available. For example, people may report whether someone drives them to the doctor or they may be asked whether their social ties would help if they needed a ride to the doctor. In addition, support can be measured with surveys and observational methods. Example survey assessments of actual support received inquire about the support received during a stressful experience. Observational studies of support received have coded supportive behaviors during a stressful laboratory experience. In addition to these measures of support actually received, support can also be measured as the perceived availability of support or perceptions of the quality of support. For example, individuals may report the extent to which they experience positive qualities including feeling loved, cared for, and listened to, as well as negative qualities such as feeling criticized and burdened with demands. These types of assessments can also be combined to form a measure of ambivalence.

## TYPES OF SUPPORT RELATIONSHIPS

Older people rely on their relationships with friends and family for social support, but they expect different types of support from different close social partners. For example, individuals often expect both instrumental and emotional support from spouse and family but expect primarily emotional support from friends. Two of the dominant models of support preferences in the literature include Cantor's hierarchical compensatory model (1979) and Weiss's functional specificity model (1974). According to the hierarchical compensatory model, people prefer to receive all types of support from spouses, followed by children and friends. In contrast, the functional specificity model suggests that different relationships serve specific functions irrespective of the type of relationship. Thus one relationship cannot fulfill all functions, and it is important to have diversity in social networks (friends and family). For example, a married woman living with a spouse may feel lonely in the absence of a best friend. Research suggests that daily well-being may be more highly associated with friend relationships than with family relations among the elderly, possibly because of the voluntary nature of friendship compared to the obligatory nature of family support. Topics of conversation among friends may also be more engaging and challenging than those with family.

## VARIATIONS IN SUPPORT BY PERSONAL CHARACTERISTICS

People have different perceptions of support and receive different types of support depending on several personal characteristics including age, gender, race, and socioeconomic status. Older people report more positive and less negative relationships with others than do younger adults. Research suggests that these outcomes may be based on improved emotion regulation and the elimination of problematic relationships. Emotion regulation involves attempts to control either the experience or the expression of emotion. A new line of work in this field suggests that people may also treat older adults more positively because older adults engage in fewer irritating behaviors or because there is less time remaining in the relationship. Indeed, in the laboratory, researchers have found that individuals are less confrontational when interacting with older adults.

Numerous gender-based social support differences have also been found. Women have a larger number of close social network members than do men that are both more positive and more negative than men's. Women tend to feel more burdened than men by the problems of others, perhaps because people are more likely to rely on women for support. Women tend to experience greater daily distress and interpersonal problems than do men. Men also tend to rely on spouses for support, whereas women rely on spouses along with friends and family for support.

Social support also varies by race and socioeconomic status. Researchers have found that African Americans have smaller networks that are composed of more family members than do Whites. These differences in the composition of networks may lead to variations in the support provided and/or received. Research shows that African Americans report less satisfaction in their marital relations and are expected to provide more support to network members. People with lower socioeconomic status (e.g., lower education or income) may experience more stressors that lead to strains in their social ties.

## SOCIAL AND PSYCHOLOGICAL PREDICTORS OF SUPPORT

Research shows that whether a person provides support depends on a variety of psychological and situational factors. Research regarding links between personality and support reveals that individuals who score high on

neuroticism scales tend to perceive greater negativity in their relationships. Another important determinant of support provided is the support history of the relationship, which is referred to as the "support bank." People are more likely to provide support if they received it previously, doing so as a means of maintaining reciprocity. Long-term relationships do not demand immediate reciprocity, whereas short-term and/or new relationships require more immediate reciprocity. Individuals usually perceive that they give more than they receive. Friend relationships that are perceived to be inequitable or are nonreciprocal are especially troublesome.

## IMPLICATIONS OF SUPPORT FOR HEALTH

After Durkheim, Engel (1977), a physician, recognized through interacting with patients that it was not only biology that contributed to their health problems but their social context as well. In response, he developed the biopsychosocial model of health, which incorporated the social context as an important determinant of health and disease. During this same period, two influential papers by Cassel (1976) and Cobb (1976) suggested ways that social support may influence health. According to Cassel, support has a direct effect by protecting individuals from disease, whereas Cobb suggested that social support influences health indirectly by reducing the negative effects of stress. Similarly, Cohen and Wills (1985) suggested that social support buffers the influence of stressors on well-being. These papers gave rise to two theoretical perspectives that guide the literature on social support and health: the main effect and buffering theories.

According to the main effect theory, there is a direct association between relationship quality and health, irrespective of one's stress level. Social support may influence health directly by improving health behaviors and increasing self-efficacy, for example. Indeed, research has shown that social support leads to overall better well-being and increased feelings of control.

In contrast, stress buffering theories state that social relations are particularly influential under stressful life circumstances by either preventing stress or reducing negative reactions to it. Researchers have found support for this model in the context of several types of life stressors, including lower levels of education, stressful life events, and chronic illness. For example, the literature indicates that stress has a less detrimental impact on health when people have socially supportive relationships. A variation of the stress buffering theory is referred to as the matching hypothesis, which suggests that support is most helpful if the support type matches with the particular stressor. For example, giving emotional support to someone in financial distress may not be as helpful as loaning him or her money. Next, the links between social support and specific health-related outcomes of physical health, mental health, and cognitive ability are discussed.

**Physical Health** Research shows strong links between social support and physical health. More supportive relations lead to reductions in the biological stress response (e.g., blood pressure, heart rate), whereas negative interactions lead to increases in the biological stress response. In particular, lower positive relations and greater negative relations are associated with increased heart rate, blood pressure, stress hormones (cortisol), functional limitations, and health problems, including lower self-rated health. Theorists suggest that the chronic stress response (e.g., increased cortisol levels) leads to wear and tear on the body and eventually to chronic health problems and death.

Social support is also associated with mortality. Researchers have found that the implications depend on the type of support, whether support is provided or received, and the type of relationship. For example, controlling for initial health status, receiving greater instrumental support is often associated with increased mortality. Researchers suggest that this may be due to the reinforcement of the sick role and the encouragement of dependency. Along these same lines, providing support may be better for health than receiving support. Controlling for health status, married people who provided support had lower mortality rates than those who received support. In addition, feelings of companionship in marriage and supportive relations at work were associated with lower mortality rates among women. At the same time, other researchers have found no association between relationship quality in specific relations (e.g., parent–child, neighbors, friends) and mortality.

Researchers who have examined the buffering effects of social support in the context of illness have found mixed results. Higher quality spousal relationships (high positive, low negative) are associated with increased survival rates among people with congestive heart failure. Some research suggests, however, that support may lead to increased mortality rates among people who have illnesses. It is also important to recognize that social relationships can encourage negative health behaviors such as eating fatty foods, smoking, and drinking. Indeed, researchers have found that obesity is contagious in social networks and that it tends to spread among network members over time, perhaps because of health behaviors or alterations in normative weight expectations. Social networks that encourage unhealthful behaviors may be particularly problematic for older adults because they have been members of their social networks for longer. Thus, they may be even more vulnerable to chronic health conditions not only because of their age but also

because of cumulative negative health effects of their network members.

**Mental Health** Social support has important implications for psychological well-being. In general, positive aspects of relationships are associated with greater well-being, whereas negative aspects are associated with lower well-being. The quality of the spousal relationship is more highly associated with well-being than the quality of other family and friend relations from young adulthood to old age. Whereas spouses and family are important for overall well-being, friends often voluntarily provide companionship, increasing feelings of daily well-being.

**Cognitive Ability** Social support may reduce declines in cognitive ability associated with mild cognitive impairment and dementia. Social support may influence cognition by improving positive affect and creating greater complexity. Close social relations may also encourage positive health behaviors and compliance with medical treatment, thus delaying the onset or progress of mild cognitive impairment. Negative aspects of relationships most likely have important implications for cognitive impairment. Research indicates that chronic stress is associated with cognitive impairment. Researchers have also suggested that early family adversity may contribute to cognitive impairment in old age.

**Dual Effects** Research suggests that social control may have the dual effect of increasing distress while simultaneously improving health behaviors and functioning. For example, social control is associated with greater depression but more frequent physical exercise among Japanese elderly. Overall, it is important to note that social relationships, support, and control may have bidirectional and dual effects.

**Implications of Health for Social Support** A person's mental and physical health may influence the social support he or she receives. Not surprisingly, people who are more depressed report increases in negative social relations over time, perceive their interactions more negatively, and elicit more conflict. At the same time, depressed individuals may burden their close relationships with high demands for support. Similarly, people who are physically ill often experience a decrease in support, become less socially active, and cause discomfort among their social partners. Indeed, researchers found that spousal support declined over time among women with breast cancer.

## FUTURE OF THE FIELD

Research innovations in social support research draw on important methodological advances. Researchers are increasingly collecting daily diary accounts of support, which involve either daily phone calls or written surveys, to examine support interactions experienced every day for a period ranging from several days to a month. These allow for interesting examinations of within-person associations regarding the predictors of support (e.g., mood) and the consequences of support for well-being.

Another increasingly popular method is to include multiple reports of support (e.g., both spouses, multiple family members). Studies of multiple family member and dyadic data allow researchers to examine the support given and received from multiple perspectives. Research shows that although people are in the same relationship, they can have very different views of the relationship. For example, parents often report greater investment and closeness to their children than do their children. Likewise, parents report greater irritation with their children than do their children with them. Research on the spousal relationship indicates that support of which the spouse is unaware (invisible support) may be more beneficial for health. Thus, dual report data allows for the examination of reciprocity as well as support received and perceived.

Researchers are also increasingly recognizing the importance of including biological stress markers in their studies of social support. Several of the ongoing national data sets include measures of social support as well as biological indicators of health such as blood pressure, heart rate, and physical assessment of body mass index.

Finally, an exciting area involves the combination of several social support measures into profiles to understand the combinations of supportive or unsupportive others that exist in a single person's social network. For example, a person may have an extremely supportive best friend relationship along with negative spouse and child relationships. These profiles allow for a more comprehensive picture of social networks. Researchers have also begun to use the profile technique to understand how the combination of structural and support aspects of relationships work together to create different social network patterns. For instance, a person may have few network members who are extremely supportive or extremely dense social networks that tend to be negative. Diverse relationship profiles (e.g., married with children and friends) usually are associated with the greatest well-being. Relationships are heterogeneous, and these new methods allow researchers to capture the dynamic nature of social networks.

In sum, social support is a multifaceted construct with great complexity in the types of interactions it refers to, the perceptions of those interactions, and the influence it has on health. Social support varies widely by the characteristics of the person, the relationship, and the

particular social context. Social support also has important implications for physical and psychological health. Thus, social support is also particularly important to consider in applied settings for older adults. Including supportive others in efforts to improve health behaviors and health status is essential. It is also important, however, for practitioners to know that relationships vary widely in their supportive qualities. Thus, before considering including relationships in prevention and interventions, researchers should ask older adults which relationships they consider as most supportive. Overall, social support is an ever-growing and dynamic construct that is used widely in many disciplines and is extremely important to include in any study of health and the social context.

SEE ALSO Volume 2: *Durkheim, Émile;* Volume 3: *Family and Household Structure, Later Life; Friendship, Later Life; Loneliness, Later Life; Marriage, Later Life; Sibling Relationships, Later Life; Social Integration/Isolation, Later Life.*

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## SPOUSAL CAREGIVING

SEE Volume 3: *Caregiving; Family and Household Structure, Later Life.*

## STRESS IN LATER LIFE

This entry focuses on patterns of late life exposure to stressors and the effects of such stressors on older adults. Stressors may be specific, discrete life events or enduring life situations that tax the adaptive capacities of the

individual. These events or situations generally refer to negative or unwelcome environmental demands or stimuli. Selye's (1956) classic conceptualization of stress refers to a state of physiological arousal that follows when environmental demands exceed the individual's response capacities. Stress and its consequences in the context of the widely studied stress paradigm are considered (Pearlin, Menaghan, Lieberman, & Mullan, 1981). Internal resources (such as coping styles) and external resources (such as social support) as well as proactive behaviors may ameliorate the adverse psychological effects of stress exposure (Kahana & Kahana, 2003a). Attention to the life course paradigm can enhance an understanding of ways that older adults respond to and cope with stressful life situations in late life. Findings from empirical studies are discussed, focusing on both conceptual and methodological challenges and advances characterizing the field of stress research. Longitudinal studies have been conducted by Eva Kahana, Boaz Kahana, and colleagues on stress, coping, and health in late life (Kahana & Kahana, 2003b).

Prior work called attention to both vulnerability and resilience of older adults who endured extreme trauma, such as the Holocaust, earlier in their life course (Kahana, Harel & Kahana, 2005) and examined responses of older adults to challenges of life threatening illness (Deimling, Kahana, Bowman & Schaefer, 2002; Kahana, Deimling, Sterns & Kahana, in press). In examining life course perspectives on stress, the focus is on stress exposure and the consequences of such exposure, including diminished psychological well-being, social functioning, physical health, and quality of life. Subsequently, buffers (or protective factors) of the stress model are considered, including coping resources, coping strategies, and proactive behavioral adaptations. To illustrate the discussion both U.S.-based and international research are cited.

## MULTIDISCIPLINARY APPROACH TO STRESS RESEARCH

Stress exposure and its impact on elderly individuals can best be understood using a multidisciplinary lens. Sociologists have contributed to stress research by recognizing the role of broad social forces and arrangements in shaping stress exposure. Social and political arrangements that differ across societies and nations also shape potential stressors, such as retirement.

An understanding of stress research in late life also benefits from social psychological orientations that consider the role of "meaning making" in determining how the self responds to stressful life circumstances (McLeod & Lively, 2007). Social psychologists often use the symbolic interactionist perspective as a framework for studying the interaction between individual selves and the social environment and interpret stress effects as a function of these interactions. These interactions have been referred to as "symbolic interactionism" (Blumer, 1969). A guiding assumption in this framework is that individuals can and do play active roles in anticipating and responding to stressful life situations (Thoits, 2006). Active responses may include cognitive maneuvers such as reinterpreting the stressful situation and behavioral adaptations such as marshaling social support (Kahana & Kahana, 2003b). This focus on planfulness and agency that individuals exercise, in spite of situational constraints, is a key tenet of the life course perspective.

Interdisciplinary explorations of the stress process would be incomplete without acknowledging biological influences (Selye, 1956). Stress affects nearly every organ within the human body. The biological system operates to maintain survival during stressful situations, but also opens avenues for disease and disabilities. Stress affects physiological processes and has been implicated in lowering serotonin levels, thereby increasing the likelihood of psychological depression. Stress also reduces the body's immune system, making the individual more susceptible to viruses, infections, and also to chronic diseases (Kiecolt-Glaser & Glaser, 1991). Such biological stress outcomes, in turn, affect individual behaviors that have additional consequences for health.

## STRESS EXPOSURE IN LATE LIFE

Older adults experience acute (one time) stressful life events and chronic (ongoing) stressors that are unique to their life stage (Kahana & Kahana, 2003b). Minor but prevalent stressors of daily living, referred to as "hassles" in the stress literature, will not be extensively discussed here as they are generally not problematic in the lives of older adults. The incidence and prevalence of acute stressors is not greater in old age than during young adulthood or midlife (Pearlin, Mullan, Semple & Skaff, 1990). However, stressors that affect identity or social networks are more common in old age as compared to earlier life course stages. Exposure to chronic illness, attendant physical impairment, and functional limitations increase for most elderly persons, resulting in a highly stressful downward spiral referred to as the disability cascade (Verbrugge & Jette, 1994). The disability cascade may result in adverse psychological consequences, such as an increase in depressive symptoms. Elderly individuals who encounter health-related stressors may also identify themselves as disabled (Kelley-Moore, Schumacher, Kahana & Kahana, 2006).

In addition to illness-related stressors, social losses are also normal stressors of later life (Kahana & Kahana, 1996, 2003b). With older age there is an increased likelihood of becoming widowed and of experiencing

the death of age peers among both family and friends. These losses create broken attachments, and society may devalue older adults, who have a diminished social network (Pearlin & Mullan, 1992). Stress exposure also poses problems because, unmitigated, it is likely to have adverse effects on quality of life outcomes (George, 2005). Nevertheless, subjective well being and life satisfaction have been found to be stable over the life course and do not decline in old age (Fujita & Diener, 2005). In the early literature on stress and coping (Holmes & Rahe, 1967), both positive (e.g., vacations, birthdays) and negative (e.g., divorce, death) life events were considered potential stressors, based on the life changes they each entail. However, there is far more evidence about adverse consequences of negative rather than positive events and, furthermore, older adults tend to be exposed to more negative than positive life events. For example, marriage, the birth of a child, and a new job are normative positive life events for young adults, but are much less likely to occur in old age. Older people are more likely to be confronted by "exit" events, representing losses, than younger people, who are more likely to experience "entrance" events that may be viewed as challenges.

In considering stressors of late life in the context of increasing life expectancy and an aging society, it is important to recognize that the traditionally defined period of old age in the United States, starting with eligibility for Social Security (at age 65 in 2008), encompasses almost 20 years for those attaining average life expectancy and possibly 30 or more years for long-lived elderly. Stressors experienced by the young-old (65–74), the old-old (75–84) and the oldest-old (85+) may differ, based on work, family life cycles, and exposure to illness and disability.

## RECENT AND CUMULATIVE LIFE EVENTS

Research on stress exposure in late life, following traditions of general stress research, has been based on diverse definitions, which may yield different portrayals of the degree and type of stress experienced by elderly persons. The classic approach to empirical stress research relied on a count of negative recent life events weighted by the amount of life change attributed to each event by judges or by the respondent (e.g., Holmes & Rahe, 1967). In more recent research, a list of events is typically presented to respondents and the number of life events. In 1976 Kiyak, Liang, and Kahana designed the Geriatric Scale of Life Events to ensure that events were age appropriate. If stress exposure is measured as the number of events one experiences, old age does not necessarily yield a larger number of recent life events than do earlier periods in the life course (Wheaton, 1990). In fact, research on the epidemiology of stress reveals that the percentage of persons with one or more life events during the past year is inversely related to age in the general population; that is, older people experience fewer life events than younger persons (Goldberg & Comstock, 1980). This may be readily linked to the placement of older adults in the life course where subsequent to retirement, they fill fewer social roles related to work, and even to family, after adult children leave the home.

When conceptualizing stress exposure in terms of discrete life events, it is important to recognize that stressful life events have cumulative effects and extend across the life course. According to this view of life stress, older adults, by definition, will have accumulated more events than persons of younger ages. The study of cumulative life stress represents an important, but relatively underutilized, approach to understanding stress in late life. In this tradition significant life crises are measured across the life course and may be combined with chronic stressors and recent life events. Indeed, chronic stressors and cumulative life events have been found to have a major impact on quality of late life (Turner, Wheaton, & Lloyd, 1995).

Stress exposure, as measured by recent life events, has been associated with negative physical health and mental health consequences (Dohrenwend, 1998). Stress exposure poses special challenges to the old-old because of their greater vulnerability and more limited coping resources or social supports. While adverse psychosocial effects of stress have been extensively studied, there is an absence of longitudinal data on the changing patterns of stress exposure posed by negative life events over time. Prior research (Turner, Wheaton, & Lloyd, 1995) has demonstrated that cumulative stressors are better predictors of adverse outcomes than are single stressors. The cumulative approach to the study of life events benefits from its comprehensiveness. However, this approach has also been critiqued for not allowing sufficient consideration of contextual influences and coping efforts in dealing with specific life events (George, 2005). The following discussion addresses the impact of exposure to chronic stressors and singular normative life events in late life.

## CHRONIC STRESSORS

Stress researchers now recognize that chronic or enduring stressors exert a significant effect on well being and thus comprise an important aspect of stress exposure. In fact, chronic stressors are stronger predictors of adverse health outcomes than acute stressors (McGonagle & Kessler, 1990). Many of these chronic stressors, such as poverty, are more clearly anchored in the social position of the

individual than they are related to age (Wheaton, 1994). Structural influences shape individuals' social positions and, over time, can lead to cumulative disadvantage (Dannefer, 2003). Chronic stressors can also include "non-events" or the absence or unavailability of desired events, such as an unfulfilled desire to become a grandparent. In the case of the elderly, social losses, including widowhood or death of elderly friends and relatives, may result in social isolation, which constitutes a stressful experience, based on absence of desired and gratifying social contacts.

Older adults experience less exposure to some forms of chronic stress than do younger persons. Older adults are less likely to report interpersonal tension (a form of chronic stress) and are less likely to argue with family members (Birditt, Fingerman, & Almedia, 2005). This may indicate both better social skills and better emotion regulation in later life. Alternatively this finding could reflect reduced involvement in social roles in late life. Furthermore, it has been suggested that, when elders do encounter chronic stressors, their appraisal process—or how they perceive and interpret a particular event—produces heightened reactivity, resulting in a greater negative reaction (Mroczek & Almeida, 2004).

Some major stressors deserve special attention because they bring about extensive and often enduring changes in the life of older adults. These stressors have been investigated as unique events rather than simply as components of cumulative stress exposure. Four such stressors include retirement, caregiving, widowhood, and trauma due to natural or manmade disasters.

**Retirement** One of the emblematic age-related changes that is a normal stressor of later life is the relinquishing of work roles. Retirement has been studied extensively by gerontological researchers and presents an excellent case to illustrate variation in response to potential late life stressors. If work roles are valued and retirement is involuntary and even unanticipated, it poses a major disruption in lifestyle, valued activities, and relationships of an older person. Based on legal protections against age discrimination in employment, involuntary or forced retirement is no longer the norm in the United States (Marshall & Taylor, 2005). However, in many other countries, including Japan and Western European counties such as the Netherlands, involuntary retirement remains the norm, which may reflect ageism and pose stressful life situations for the elderly.

For older persons who have been engaged in routine, physically demanding, or even demeaning work roles, and who do not value their work roles, retirement may be a welcome and positively anticipated transition (Wheaton, 1990). Retirement for these elderly, who typically are of lower socioeconomic status, represents freedom from chronic stressors of a demanding and unrewarding work life, and they are pleased to adopt new leisure-oriented social roles. In a longitudinal study of urban elders and retirees to the Sunbelt states of the southern United States, retirement was rarely mentioned as a major stressor experienced in the past (Kahana et al., 1999).

When individuals experience early, involuntary retirement that does not fit into their expected life course trajectory, they may appraise it as a chronic stressor. If retirement fits into the individual's chosen life trajectory, high levels of retirement satisfaction are reported, even if life after retirement does not match anticipated experiences (Fitzpatrick, Vinick & Bushfield, 2005).

In a longitudinal study of retiring civil servants in London, Mein and colleagues (2003) found that retirement did not have any adverse effects on physical or mental health. Rather, those who continued to work after age 60 experienced deteriorated mental health. Analysis of European data from the SHARE (Survey of Health, Ageing, and Retirement in Europe) project shows that many workers seek retirement to escape from unfavorable jobs (Siegrist et al., 2007).

**Caregiving** Normative stressors of advanced old age include caregiving to an ill spouse, sibling, or adult child. An extensive literature documents the burdens of caregiving particularly for caregivers of those suffering from dementia and Alzheimer's disease (Kiecolt-Glaser, Dura, Speicher, Trask, & Glaser, 1991). Characteristics of the patient (e.g., disruptive behavior), the context of caregiving (at home or in a long-term care facility), and resources of the caregiver (e.g., social supports) influence both the appraisals of caregiving and the consequences of caregiving stress (Pearlin et al., 1990). In addition to stressors posed by caregiving, older adults must also deal with competing role demands on the one hand and with psychological strains such as low self-esteem on the other. Gerontological research has focused extensively on the special burdens of elderly spouses who are coping with their own frailty, even as they provide care to their spouse.

Effective coping strategies can diminish the stressful effects of caregiving, such as physical health problems and poor mental health. Gerontological literature has also noted stresses experienced by grandparents who are raising grandchildren. Frequently, such grandparents are racial or ethnic minorities who face additional stressors posed by economic or neighborhood-related hardships (Nicholson Grinstead et al., 2003).

Cultural factors also influence both caregiver stress and the process of coping with stress. For example, Latino caregivers encounter greater stress exposure due to the

earlier onset of disabilities among Latino elders (Aranda & Knight, 1997). Research comparing caregivers in the United States with those in other countries, such as Japan, has revealed both commonalities and differences in stressors of caregiving and coping responses to such stressors (Wallhagen & Yamamoto-Mitani, 2006). Comparative research suggests that American caregivers need more anticipatory socialization (or preparation for their new role as caregiver), whereas Japanese caregivers encounter greater difficulty in accepting services provided by others. Obligations for caregiving in the home are generally strong in Japan, and are traditionally the responsibility of the wife of the eldest son. With the growing aged population of Japan, traditional patterns of caregiving are shifting, and institutions are increasingly being utilized for services to frail elders. These social changes pose special stressors by creating ambiguity in role expectations.

**Widowhood** Widowhood is a normative stressor of late life, particularly for women. About one half of women ages 65 and older are widows, but only about 15% of men of similar ages are widowers. Widowhood has wide ranging reverberations for stress exposure in late life. Bereavement and loss of a life partner are generally viewed as extremely stressful experiences. Studies have consistently demonstrated adverse effects of widowhood on mental health and psychological well-being (Wilcox et al., 2003). However, after the initial period of adverse reaction, most bereaved spouses return to their baseline levels of psychological well being.

In addition, widowhood often results in further social losses, as friends and family may distance themselves from the widowed individual. For women, widowhood also entails exposure to financial stressors, as survivors' benefits are typically only a fraction (about one-half) of the husband's pension (Smith & Zick, 1996). In terms of coping with widowhood, widows often employ role substitution, where they engage in higher levels of informal social participation than their non-widowed counterparts (Utz, Carr, Nesse, & Wortman, 2002). For some men and women, the experience of widowhood also depends on their ability to marshal assistance from adult children.

Van Den Brink et al. (2004), in their longitudinal analysis on the effects of widowhood on elderly men in three European countries (Finland, the Netherlands, and Italy), found that men who were widowed within the past five years experienced more difficulties in independent activities of daily living (ADL) than those widowed for longer periods of time. The Swedish Panel Study of Living Conditions of the Oldest Old found that engagement in leisure activities served as a buffer that diminished the psychological and physiological impacts of widowhood (Silverstein & Parker, 2002).

**Traumatic Stress** The study of exposure to overwhelming traumatic events such as natural disasters, war, and interpersonal violence has developed into a specialized field of scientific inquiry. Such traumatic events represent extreme forms of stress exposure for all ages and result in physical morbidity illness, post-traumatic stress disorder (PTSD), and other mental health problems (Van der Kolk, McFarlane, & Weisaeth, 2007).

Researchers differentiate between the impact of traumatic stress occurring in old age and the long-term consequences of enduring traumatic experiences earlier in life. Natural disasters have a pronounced, immediate effect on physical health and psychological well being of aged survivors.

Many international research studies center on traumatic stress, focusing on the impact of manmade as well as natural disasters on the elderly. Chung et al. (2004) studied the results of experiencing an aircraft crash or train accident. The impact of these traumatic events on elderly groups did not vary from that of the younger population. Their findings are similar to earlier studies of natural disasters such as floods, earthquakes, and volcanoes. In a comparative study of post-traumatic stress as a result of the 1988 earthquake in Armenia, the proximity of the individual to the epicenter of the quake was a stronger predictor of stress level than the victim's age (Goenjian et al., 1994).

Turning to the study of human disasters, wartime combat often diminishes well-being in later life. Young adults who were prisoners of war may experience post-traumatic symptoms throughout the remainder of their life course (Chung et al., 2004). Studies conducted by Israeli researchers show that stress from earlier trauma in young adulthood, such as the Holocaust, may recur if the individual encounters war-related stressors in later life (Solomon & Prager, 1992). Research comparing elderly survivors of the Holocaust with immigrants to the United States and to Israel revealed different typologies of trauma survivorship, ranging from the "resilient" to the "vulnerable" survivor (Kahana, Harel, & Kahana, 2005). Those survivors who report being socially integrated are most likely to exhibit resilience. Whereas international literature focused extensively on war and natural disasters, researchers in the United States have documented adverse effects of individual stress exposure, in situations where older adults are victims of abuse or crime (McCabe & Gregory, 1998).

## COPING WITH STRESS IN LATER LIFE

Understanding how the adverse affects of stress exposure on quality of life may be ameliorated is an important part of the study of the stress process. External and internal coping resources that facilitate effective coping are

reviewed in this section, followed by a discussion of general coping strategies and specific proactive behaviors.

**Coping Resources** Social supports and economic resources are among the most widely studied external resources available to older adults (Kahana & Kahana, 2003b; Thoits, 1995). Self-efficacy (or effectiveness), mastery, and optimism are valuable internal psychological resources for coping. Each of these resources will be discussed below.

***Social Supports.*** The effectiveness of coping strategies used by individuals in stressful life situations is strongly influenced by the social and environmental resources they possess. Social supports can encourage and reassure individuals as they confront stressful life situations. Social support includes the availability and receipt of instrumental, emotional, and/or informational support. Research indicates that perceived support, or one's belief in the availability of support, serves as a stronger stress buffer than does the actual receipt of support (Wethington & Kessler, 1986). For older adults, receiving instrumental support can be threatening, because it underscores their neediness and vulnerability, potentially resulting in lower self esteem.

Having a confidante or a close human relationship has been found to be a consistent buffer of stress (Cohen & Wills, 1985). In old age, bereavement, and particularly widowhood, may be a major stressor as well as a major loss of significant social support (Lopata, 1995). One of the important ambiguities in the stress and coping literature is that the same phenomena may be alternatively viewed as stressors or as buffers in the stress paradigm (Kahana, 1992). The mechanisms whereby social support serves as a coping resource are not yet well understood. Potential pathways include social supports that enhance effective coping, mastery, and self esteem or encourage engagement in healthy lifestyle behaviors (Thoits, 1995). In very old age, increasing levels of stress exposure and a decline in personal coping resources may be counterbalanced by availability of social resources and supports (Martin, Grunendahl, & Martin, 2001).

***Self-efficacy or Mastery.*** *Self-efficacy* represents an important internal coping resource, as it relates to individuals' appraisals of their own effectiveness in dealing with stressors through productive coping behaviors (Bandura, 1986). Limited social resources have been associated with reduced self efficacy, but these associations diminish in late life (Gecas, 1989). Self efficacy, which some also refer to as *mastery* (Bandura, 1986), represents an important, situation-specific coping resource, as it results in positive outcome expectations and can thus facilitate instrumental, problem-focused coping in late life. This is particularly important because older adults experience many uncontrollable events; yet, to cope effectively with stressful situations, they must maintain a belief that they can cope well with problems at hand. Mastery, or self efficacy, can mediate both earlier and later life economic hardships that affect elders' later physical and mental health (Pudrovska et al., 2005).

***Optimism.*** Optimism also serves as an important coping resource in late life. This characteristic shares, in common with self efficacy, an underlying propensity for positive outcome expectations. Persons with optimistic life orientations experience better outcomes after confronting stressful illness situations, ranging from breast cancer to coronary bypass surgery (Scheier & Carver, 1985). These findings have also been confirmed in international research such as the Zutphen Elderly Study (Giltay et al., 2006). In a longitudinal follow up of 887 men in the Netherlands, this study found optimism to be relatively stable over time and a significant predictor of reduced mortality from cardiovascular illness. The value of optimistic dispositions has been studied primarily in the context of stressful life situations. Optimism is a better predictor of subsequent physical and mental health among older individuals facing stressors, such as caregiving demands, than it is among their less stressed counterparts (Robinson-Whelen et al., 1997). Personality characteristics such as extroversion and openness to experiences are also coping resources and can result in positive reappraisals of life experiences and stressors, leading to more effective coping efforts (Costa, 1996). While there is an implied link between coping resources and coping strategies, the mechanism by which these coping resources ameliorate adverse effects of stress are not well understood.

**Coping Strategies** Direct coping efforts in stressful life situations have been categorized along multiple dimensions. To capture the complexity of coping responses, Skodol (1998) identifies six coping categories that crosscut much of the literature: (a) planful problem solving, (b) support seeking, (c) focusing on the positive, (d) distraction or distancing, (e) wishful thinking or escape, and (f) acceptance. The most widely accepted categories of coping strategies are active (or problem-focused) coping efforts and emotion-focused efforts (Lazarus & Folkman, 1984). Active coping efforts are most useful when individuals face stressors that are controllable, such as difficulties with coworkers. In contrast, emotion-focused efforts, and cognitive reappraisals, may be most effective when confronting stressors that cannot be readily controlled, such as the death of a spouse (Lent, 2007).

Research on age differences in the use of coping strategies is limited. Some studies suggest that older adults are more likely to use emotion-focused "palliative" coping than are their younger counterparts (Folkman, Lazarus, Pimley, & Novacek, 1987). In regard to gender

differences, men exhibited more problem-focused than emotion-focused coping (Folkman & Lazarus, 1980). The type of problem being addressed was a key determinant of coping strategies selected, with stressful work situations eliciting more problem-focused coping and health challenges eliciting more emotion-focused coping. Work by Folkman and Lazarus (1980) also underscored the important role played by appraisals in shaping coping efforts. Appraisal or evaluation of stressors, based on perception of the degree of threat they pose, serves as a key determinant of types of coping strategies invoked to respond to the stressor (Folkman & Lazarus, 1980).

Traditional ideas of coping based on the work of Folkman and Lazarus focus on appraisals of the problem, followed by consideration of (a) problem-focused or task-oriented coping, (b) emotion-focused coping aimed at managing emotional distress, and (c) avoidance coping, wherein individuals employ various strategies to escape or focus away from the problem situation. These traditional categorizations offer a shared lens for classifying coping, but they also suffer from some conceptual ambiguities. For example, they do not fully separate appraisal from coping, they do not distinguish the goals of coping from the methods of coping, and they do not address the propensity of individuals to engage in multiple coping efforts, either concurrently or sequentially. Because many studies have applied Folkman and Lazarus's 1980 formulations, a review of their findings as well as alternative conceptualizations of coping in late life follow.

Studies of coping with chronic illness in late life have been reviewed by Poon, Basford, Dowzer, and Booth (2003). Problem-focused strategies have been generally judged as more effective than emotion-focused or avoidant coping strategies, even when dealing with chronic illness. However, some studies offer evidence of benefits of emotion-focused or avoidance-oriented coping, particularly when dealing with uncontrollable events such as life-threatening illness.

The most widely used assessment tool for categorizing coping responses has been the "Ways of Coping Checklist" developed by Folkman and Lazarus (1985). This instrument includes 66 items, referring to thoughts or actions that an individual uses to deal with a self-selected problem situation that occurred in the past month. Based on factor analyses, problem-focused and emotion-focused coping subscales have been identified.

**Proactive Adaptations and Resilience** Approaches to conceptualization and assessment of coping strategies have yielded inconsistent results in predicting quality of life outcomes in response to stress exposure (George, 2005). Such results may be due to the over-inclusiveness of using problem-focused versus emotion-focused categorizations. Knowing that a person did something instrumental about a problem may be insufficient without specifying what adaptations or behaviors were used. Accordingly, in dealing with an illness diagnosis, a patient may seek health information, engage in health promotion, seek a second opinion, marshal social support from family, or focus on family or work roles to compensate for future inability to fulfill such roles. Classifying these different modes of behavior only as problem-focused coping does not allow for sufficient discrimination between alternative behavioral strategies. It also fails to link the literature on coping with stress to the extensive parallel literature on health promotion, prevention, and self care (Ory & Defriese, 1998).

To address this limitation, the model of Preventive and Corrective Proactivity (PCP) was proposed to explore the broad array of behavioral adaptations older adults use in dealing with normative stressors of aging (Kahana & Kahana, 1996, 2003a; Kahana, Kahana & Kercher, 2003). Most of the literature on coping with stress has been based on assessments of self-reported propensity toward active or passive coping, emotional or cognitive coping, or approach versus avoidance coping (Aldwin, 2000).

The PCP model (Figure 1) considers specific proactive behavioral responses to stressful life situations faced in late life, including chronic illness, social losses, and person-environment incongruence (Component A) (Kahana & Kahana, 1996, 2003a). Preventive behaviors such as health promotion, planning ahead, and helping others (Component C1), contribute to the development of external social resources (Component C). such adaptations may delay the onset of some stressors, such as ill health or disability. Furthermore, corrective adaptations, such as marshaling support, role substitution, and environmental modifications (Component C2), may counteract adverse effects of stressors on quality of life outcomes (Component E). Proactive behavioral adaptations thus add to the benefits that older adults derive from internal resources such as hopefulness and self esteem (Component B). Longitudinal studies of successful aging provide support for the proposed model. They demonstrate the benefits of exercising, planning, and marshaling support in ameliorating the impact of stressors on quality of life outcomes (Kahana et al., 2002; Kahana, Kahana, & Kelley-Moore, 2005).

The positive psychology movement (Seligman, Steen, Park & Peterson, 2005) called attention to the importance of resilience and adaptive capacities of persons, even in the face of great adversity. This movement focuses on the need and capacity for restoring emotional well-being rather than simply diminishing symptoms of distress. Empirical research shows that posttraumatic growth, transformation, and transcendence often emerge after experiencing

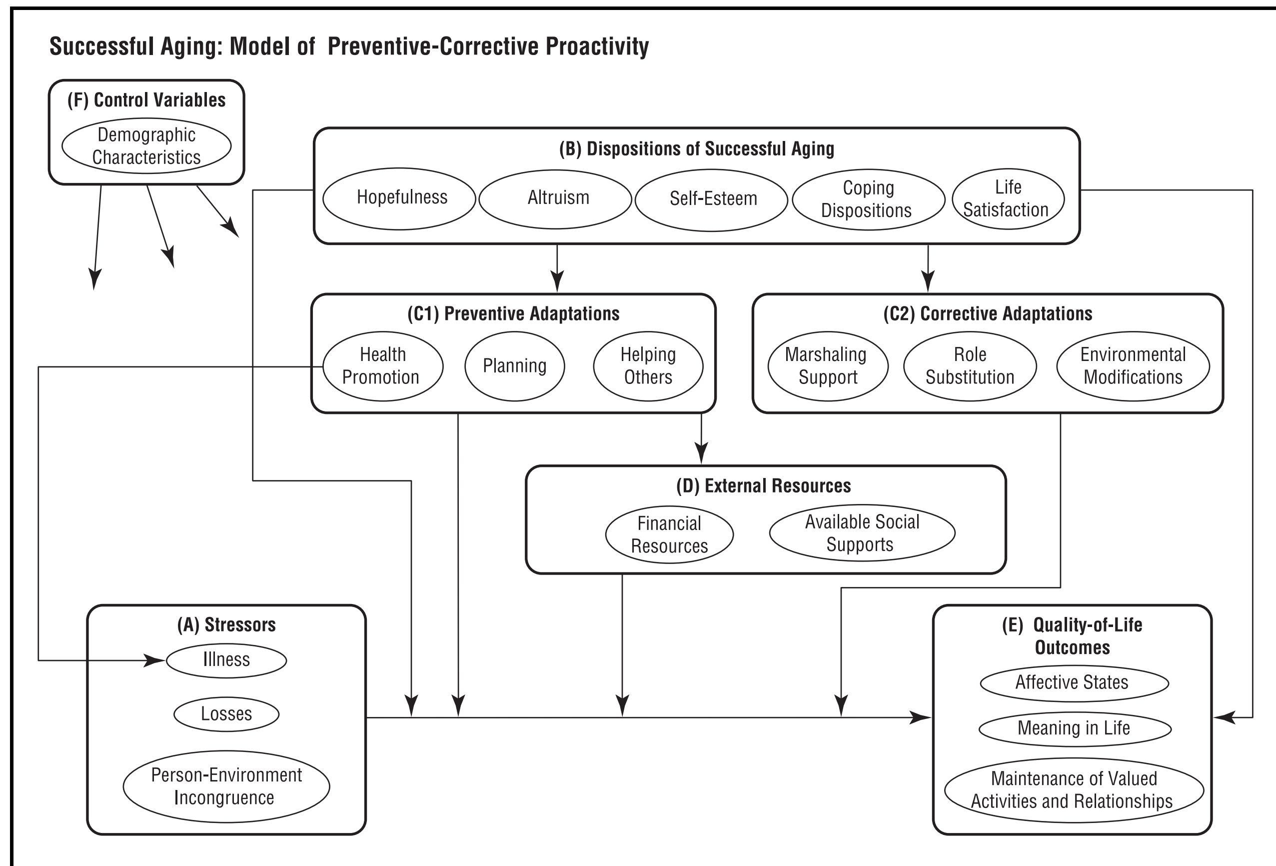


***Figure 1.*** *Successful aging. A model of preventative–corrective proactivity.* CENGAGE LEARNING, GALE.

stressors, such as life threatening illness (Calhoun & Tedeschi, 2006). In evaluating potential strengths of older people and their resilience in dealing with stress exposure, *wisdom* is a unique coping resource that may contribute to life satisfaction in late life, even for older adults encountering major stressors (Ardelt, 1997).

## MECHANISMS LINKING STRESS EXPOSURE AND PSYCHOSOCIAL OUTCOMES

In considering late life responses to stress, certain potential mechanisms may be responsible for adverse psychological and social outcomes. One possible explanation of negative quality of life is older adults' increased exposure to certain stressors. They are more likely to experience both chronic illness and social losses than their younger counterparts. Kahana and Kahana (2003b) refer to these prevalent stressors of late life as normative stressors of aging. In addition to more normative stressors, older adults may be at risk for negative outcomes, based on diminished resources or greater vulnerability.

Researchers have debated whether greater stress exposure leads to greater vulnerability and plays a major role in explaining adverse outcomes in late life. Some researchers argue for the importance of comprehensive and sophisticated measures of stress exposure that transcend the traditional focus on stressful life events (Turner, Wheaton, & Lloyd, 1995). It has also been argued that greater vulnerability of the aged to stressful life events is influenced by the greater severity and lack of controllability of events that they experience. Serious illness, caregiving, and widowhood exemplify such stressors.

An important challenge in understanding the extensive research on consequences of stress in later life relates to placing physical health alternatively as a stressor or as an outcome of stress exposure. Because physical health problems are normative late life stressors, they are often studied as sources of stress exposure, with mental health outcomes as a result of stress (Poon et al., 2003). However, stressful life events, and particularly traumatic stressors, also are likely to have an impact on physical health (Thoits, 1995).

## SOCIAL AND DEMOGRAPHIC INFLUENCES ON COPING WITH STRESS AND STRESS OUTCOMES IN LATE LIFE

Risk factors for stress exposure are not shared equally among all elderly. Women, elderly minorities, the unmarried, and individuals of lower socioeconomic status (SES) experience higher rates of stress exposure that accumulate throughout the life course, leading to more intense inequality in late life (Thoits, 1995). Poon et al. (2003) analyzed the role of demographic influences on coping with chronic disease and found that three overarching sociodemographic factors affect coping and management of health conditions: education, gender, and personality.

Low educational levels are associated with higher rates of stress exposure and poorer coping strategies. Higher levels of education may facilitate instrumental problem-focused coping among older adults facing health problems (DeKlerk et al., 1997). Individuals possessing higher education are more likely to utilize positive coping strategies that include health management, medication compliance, and mastery of assistive techniques when dealing with stressful health situations. Education was negatively related to resigned helplessness in coping (Krogh et al., 1992). Those with lesser education tend to misunderstand treatment strategies and have more restrictive communication with health care professionals, thus exacerbating their health problems and leading to further health inequalities (Poon et al., 2003).

Individuals of low SES often live in poor neighborhoods that increase exposure to environmental stressors. Living within a central city neighborhood is a strong predictor of psychological distress, related to the perceived neighborhood disorder. Low income neighborhoods are plagued with high crime levels, drugs, vandalism, and high noise levels, which residents are powerless to change. The environmental stressors of low-income neighborhoods lead to increased susceptibility to chronic health problems such as asthma, arthritis, and high blood pressure. Those experiencing more disadvantages will have resulting risk factors that accumulate throughout the life course (Ferraro & Kelley-Moore, 2003), leading to inequalities in stress exposure.

Important interactions among SES, gender, and minority status can increase stress exposure in late life. Women are more likely than men to be poor, with racial stratification among women making the situation more problematic for minorities. Overall, women live longer, poorer, more disabled lives than do men (Harrington Meyer & Herd, 2007). Racial and ethnic minorities are further disadvantaged because they experience worse health and more chronic health conditions than the White population (Hayward, Friedman, & Chen, 1996). Additionally, minorities are at increased risk for entering into poverty; they are more likely to have higher rates of unemployment, lower income levels, fewer assets, and poorer health. Women and minorities often lack the capital to mitigate the risk of poverty. The stress and effects of disadvantage persist into retirement (Hayward, Friedman & Chen, 1996).

The retirement years leave many women living in increased levels of poverty. Throughout the life course, women generally carry the burden of unpaid care work, which has tremendous implications for old age security. Social Security rewards marriage and steady employment (Harrington Meyer & Herd, 2007). The number of women, specifically African American women, who reach retirement age and are ineligible for spousal Social Security benefits is increasing. Additionally, with private pensions moving toward defined contribution plans, women will lose access to spousal protections and must rely on their own pensions and Social Security (Harrington Meyer & Herd, 2007).

British researchers found that demographic characteristics and exposure to adverse life events interact to shape adverse results of stress over the life course (Grundy & Holt, 2000). Thus, for example, women may be more sensitive to network-related events (or stressful events befalling their significant others), whereas men may be more adversely affected by financial stressors (Conger, Elder, Simons, & Ge, 1993). In terms of coping strategies, some research shows that women employ less effective coping methods (Poon et al., 2003).

Gender differences have been consistently reported in depressive symptoms, which reflect major psychological consequences of stress exposure (Turner & Avison, 1989). Women consistently report higher levels of depressive symptoms than do their male counterparts. Research suggests that these gender differences reflect greater vulnerability of women rather than their higher levels of stress exposure (McLeod & Kessler, 1990). Alternatively it has been argued that women's stress exposure may be underestimated, as they are particularly sensitive to negative events endured by significant others (Thoits, 1995). Research with both male and female elderly cancer patients underscores the importance of events endured by the family, particularly spouses and adult children, relative to personal stress exposure when living with cancer (Kahana et al., in press).

Disadvantaged social groups respond differently to stressful life situations (Thoits, 1995). Personality may shape the coping strategies employed by individuals; general outlook on life, hardiness, locus of control, and neuroticism affect coping styles in both a positive and negative manner. Individuals possessing higher levels of self-esteem and mastery generally experience more

positive effects from coping. Avoidance and passive coping are associated with greater dysfunction and depressive symptoms. Individuals who are optimistic are more likely to employ effective coping strategies and, as a result, adjust to illness more easily than pessimists (Poon et al., 2003).

## UNDERSTANDING STRESS IN A LIFE COURSE PERSPECTIVE

The stressfulness of specific events generally depends on appraisals of the person experiencing it (Lazarus & Folkman, 1984). Such appraisals can best be understood by placing stressors in the context of the life course (Settersten, 1999). Sociologists thus emphasize socially recognized and shared life transitions (e.g., retirement) that are intertwined with age-related role changes (e.g., empty nest) throughout life. Understood in this context, the stressfulness of specific normative and non-normative events is likely to increase when the event takes place off-time rather than on time; that is, events that occur at the normal or expected point in the life course are less stressful than those that occur sooner or later than anticipated. Accordingly, major normative life transitions during late life include retirement and widowhood. The impact of both of these events is likely to be exacerbated if they occur at earlier points in the life course (Lopata, 1995). There may be fewer role models for adapting to the multiple social and psychological changes brought about by such stressful life events during middle age and for young-old individuals.

Another important life course concept that shapes appraisal of stress is related to cohorts, or members of the same group. Earlier cohorts of older adults who had lived through the Great Depression or World War II may respond to financial threats or challenges more strongly than would their counterparts who did not have similar traumatic experiences related to financial deprivation (Elder, 1974). Similarly, computer-based transactions may create stress for older cohorts, who must cope with unfamiliar tasks, whereas the computer is a welcome resource to more recent cohorts who are experienced in using computers and the Internet.

Sociologists have acknowledged the importance of using life course perspectives in understanding how people cope with stress (Settersten, 1999). Late life adaptation also represents a central concept in the study of developmental psychology. Accordingly, human development has been defined in terms of the changing adaptive capacities of individuals throughout the life span (Baltes, 1987). However, data regarding life course differences in coping with stress are typically based on cross-sectional studies, comparing young adults and older persons. Age differences in coping have been interpreted as reflecting life-stage-related developmental changes in coping skills and recognition that differential stress exposure throughout life may elicit different coping resources (Lazarus & Folkman, 1984).

## CHALLENGES AND OPPORTUNITIES FOR STRESS RESEARCH IN THE FUTURE

The stress paradigm has served as a flexible and robust conceptual framework that has generated an extensive and useful body of empirical research. As its fundamental tenet, this paradigm proposes that adverse life events or life situations threaten quality of life of individuals. However, adverse stress effects may be ameliorated by social and personal resources and proactive behaviors (Kahana & Kahana, 2003). Elements of the stress paradigm have been well articulated in conceptual frameworks presented by Pearlin et al. (1981), with later refinements offered by numerous scholars, including Thoits (1995), George (2005), Lazarus and Folkman (1984), Kahana and Kahana (1996), and Wheaton (1994). Refinements of the stress process model have expanded conceptualization and measurement of stress exposure. They also helped identify a broader array of relevant personal and social resources and proactive behaviors that can help ameliorate adverse effects of stress exposure. Developments in understanding possible positive outcomes in the aftermath of stressful life experiences has also moved the field forward. Empirical research utilizing the stress paradigm is becoming increasingly sophisticated. Longitudinal studies with better measures of coping and adaptations are likely to help clarify mechanisms that link stress exposure and buffers to quality of life in old age.

This review highlights the important roles played by exposure to adverse life events and life situations in placing individuals at risk for physical, psychological, and social problems. These adverse effects can be reduced by availability of social and psychological resources and proactive behavioral adaptations (Kahana & Kahana, 2003a). The nature of stressors confronted, changes throughout the life course, and resources are also influenced by life course transitions. Social policy can have an important impact, both on the distribution of social resources and the level of stress exposure experienced by individuals. In addition, practical interventions can serve useful functions in strengthening individual coping skills to insure that stressors may be confronted in ways that maintain good quality of life.

**SEE ALSO** Volume 2: *Social Support, Adulthood; Trauma;* Volume 3: *Aging; Allostatic Load; Caregiving; Mental Health, Later Life; Oldest Old; Retirement; Self; Social Integration/Isolation, Later Life; Widowhood; Wisdom.*

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# STRUCTURAL LAG

**SEE** Volume 3: *Riley, Matilda White.*

# SUICIDE, LATER LIFE

Suicide is the willful taking of one's own life. Theories of elderly suicide include two broad categories: individual-based psychiatric and social perspectives. The first links suicide in the elderly to an enduring personal trait, such as a fundamental incapacity to adapt or cope, or recurrent depression (Nisbet, 2000). The second emphasizes social risk and protective factors outside of the individual psyche as linked to suicide risk. These include physical illness and supportive social networks. These perspectives are viewed as complementary. For example, an elderly person who has had a lifelong depression problem might ultimately commit suicide only after a severe external life crisis such as the death of a spouse.

## PSYCHIATRIC PERSPECTIVE

Affective psychiatric illness, especially severe depression, is the leading predictor of elderly suicide and is independent of some important secondary predictors, including social factors and physical health (Conwell, Duberstein, & Caine, 2002). The best research studies in this area are those that rigorously compare the psychological and social worlds of suicides (*cases*) with those of nonsuicidal persons

(*controls*). A meta-analysis (or integrative summary analysis) of 19 case-control studies dealing with psychiatric risk factors for elderly suicide determined that the strongest predictor of suicide was depressive illness, including manic depression. Eight studies found "very large" associations, and five detected moderate or small associations. Severe physical illness, pain, and visual impairment produced significant, although weaker, risk ratios (measures of the relative importance of risk factors) in 13 studies (Grek, 2007). Unfortunately, psychiatric-oriented studies on elderly suicide tend not to include a broad or varied range of social risk and protective factors, making it difficult to weigh the relative contributions of psychiatric versus social factors.

## INDIVIDUAL-LEVEL RISK AND PROTECTIVE FACTORS

There are many social reasons to expect that elderly people would have a high rate of suicide, relative to younger persons. First, sociological research dating back to the findings of Émile Durkheim (1858–1917) reveals that social support is a key buffer against suicide risk. Similar to arguments made in modern disengagement theory, the Durkheimian model of elderly suicide views social integration, measured in relation to bonds to people and institutions such as marriage, work, and the family, as declining with age (Stack, 2000). With retirement comes the loss of social relationships with coworkers and the purpose associated with the routines of employment. Friends and spouses die, thus contributing to loneliness and weakened social support networks. Many people lose ties to their familiar home environment as they move into small quarters in nursing homes. Incomes tend to decrease with retirement, resulting in financial strain. Health costs can rise, making it difficult to pay for necessary medical care and prescription medicine. Age-related health stressors include memory loss, blindness, and battles with long-term terminal illnesses such as cancer, strokes, and paralysis. These health problems can further limit one's social participation and interactions. Although these stress factors affect most elderly people, there is wide variation in suicide rates among subgroups of the elderly. For example, elderly women are more apt to lose a spouse than elderly men, but elderly women have a lower suicide rate (Stack, 2000). Table 1 provides data on the suicide rates (per 100,000) for gender-, race-, and age-specific groups between 1950 and 2004.

**Gender** Older men's suicide rates are typically 5 or more times that of elderly women. The male to female ratio narrowed between 1950 and 1970 from 5.6 to 4.8, but since 1970 it has widened. In fact, elderly men commit suicide at a rate nearly 8 times that of elderly women. The gender gap in elderly suicide remains a puzzle. Many risk factors for elderly women are the same (e.g.,

| Group | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2004 |
|---|---|---|---|---|---|---|---|
| White Males | | | | | | | |
| 65+ | 55.8 | 46.7 | 41.1 | 37.2 | 44.2 | 33.3 | 31.2 |
| 65–74 | 53.2 | 42.0 | 38.7 | 32.5 | 34.2 | 24.3 | 24.2 |
| 75–84 | 61.9 | 55.7 | 45.5 | 45.5 | 60.2 | 41.1 | 37.1 |
| 85+ | 61.9 | 61.3 | 45.8 | 52.8 | 70.3 | 61.6 | 48.4 |
| Black Males | | | | | | | |
| 65+ | 9.0 | 9.9 | 8.7 | 11.4 | 14.9 | 11.5 | 11.3 |
| 65–74 | 10.0 | 11.3 | 8.7 | 11.1 | 14.7 | 11.1 | 9.8 |
| 75–84 | * | * | * | 10.5 | 14.4 | 12.1 | 15.0 |
| 85+ | * | * | * | * | * | * | * |
| White Females | | | | | | | |
| 65+ | 9.9 | 8.8 | 8.5 | 6.4 | 6.8 | 4.3 | 4.0 |
| Black Females | | | | | | | |
| 65+ | * | * | 2.6 | * | 1.9 | 1.3 | * |
| Ratio WM/BM | | | | | | | |
| 65+ | 6.2 | 4.7 | 4.7 | 3.3 | 3.0 | 2.9 | 2.8 |
| Ratio WF/BF | | | | | | | |
| 65+ | * | * | 3.3 | * | 3.6 | 3.3 | * |
| Ratio WM/WF | | | | | | | |
| 65+ | 5.6 | 5.3 | 4.8 | 5.8 | 6.5 | 7.7 | 7.8 |

Note: * = counts are inadequate to calculate reliable rates (CDC, 2006).

***Table 1.*** *Suicide rates per 100,000. By gender, race and age group, elderly population, USA, 1950–2004.* CENGAGE LEARNING, GALE.

depression level) or greater (e.g., poverty, living alone, widowhood, physical illness, and disabilities) than those for elderly men (Canetto, 1995; Stack, 2000). However, elderly women benefit from a series of protective factors: They are more likely than their male peers to seek appropriate levels of psychological help, to use less lethal methods of suicide, to have stronger social networks, to have better and more flexible coping abilities, and to be institutionalized in nursing homes where committing suicide is more difficult. For example, in 2004 42.9% of elderly women and 78.7% of elderly men ages 65 to 74 used guns in their suicide. National data from the General Social Surveys showed that 49% of elderly men approve of suicide in the case of terminal illness, compared to only 33% of elderly women. The greater cultural support among elderly men also contributes to their higher suicide rate.

**Race** Elderly White males have a much higher suicide rate than elderly Black males. However, the gap has narrowed from a ratio of 6.2 in 1950 to 2.8 in 2004, wherein White rates declined while Black rates rose. Further, elderly White females have a suicide rate at least triple that of elderly Black females. The reasons are largely unknown. It should be noted that caution needs to be exercised in interpreting official data on elderly suicide by race. The cause of death is ascertained by county medical examiners and coroners. It has been argued that suicides are often misclassified as unintentional poisonings, and this is apparently especially true of elderly Blacks. For example, the ratio of unintentional poisonings to official suicides is 5 times greater for Black males over 65 than for their White counterparts. With adjustments for these and other probable misclassifications of suicides, the racial gap in suicide narrows (Rockett, Samora, & Coben, 2006).

**Social Support** Indicators of supportive social networks and religious ties were investigated in some research, but their associations with suicide (as protective factors) were small compared to psychiatric morbidity (Grek, 2007). An analysis of the National Mortality Followback Surveys, which sought to identify the characteristics associated with 354 elderly suicides from a sample of 5,870 elderly deaths, determined that after controlling for a variety of factors (including gender, race, and depression), social networks variables affected suicide risk. For example, participation in religious activities lowered risk by 18%, whereas living alone increased risk 2.01 times. Change of residence in the last year of life can disrupt social support networks. Elderly persons who moved recently were 1.8 times more apt to die of suicide than their counterparts. Being male increased risk 2.6 times, whereas being White increased risk 6.7 times. All these relationships are independent of socioeconomic confounders or control variables.

**Marital Integration** Divorced men and women in all age brackets of the elderly generally have a suicide rate of at least double that of their married counterparts. For example, divorced men between 75 and 79 have a suicide rate of 103 per 100,000, 3.2 times that of their married age-matched peers. Divorced elderly women ages 75 to 79 have a suicide rate of 10.7 per 100,000, 2.4 times that of married women of the same age. The ratios are nearly as large for the widowed versus the elderly married. However, whereas marriage protects the elderly from suicide, it protects the middle-aged age groups more so. Elderly spouses are more apt than middle-aged spouses to be ill or disabled and, as such, provide less social support.

**Opportunity Factors: Guns and Nursing Homes** Opportunities for committing suicide vary according to the availability of lethal means and the presence of motivated rescuers who will intervene to stop suicide attempts. From the National Mortality Followback Surveys, elderly persons who had a firearm available in their home were 4.6 times more likely to die from suicide than elderly persons who did not have a gun available. Elderly persons who resided in nursing homes were 59% less apt to die by suicide than elderly persons who resided elsewhere. The elderly in nursing homes are under greater surveillance than their counterparts, just as married people are relative to singles.

## OTHER RISK AND PROTECTIVE FACTORS

Suicide rates vary by region. State-level studies of elderly suicide are important for various reasons, including the notion that various social welfare policies affecting the financial status of the elderly are set at the state level. For example, states in which incomes for the elderly are higher and in which religion is stronger tend to have lower suicide rates. States in which guns are more available tend to have higher elderly suicide rates. For example, the two states with the lowest elderly rates are Rhode Island (7.25 per 100,000) and Massachusetts (6.48 per 100,000). Both have high church attendance rates and high proportions of Catholics. States with the highest elderly suicide rates are Nevada (32.12 per 100,000), Idaho (26.15 per 100,000), and Montana (25.87 per 100,000), states with relatively easy access to guns and low religiosity rates.

**Imitation** The elderly are as vulnerable as youth to copycat effects (i.e., imitation) due to highly publicized suicide stories in the mass media. The impact of a suicide story in the news on the elderly rate almost doubles if the

story involves an elderly person. One can speculate that elderly persons identify with the victim in the story.

**Cohort Effects** Cohort analysis traces the suicide rates of persons born in a certain time period (e.g., the baby boomers) as they age over the life course. Large birth cohorts are viewed as being at a disadvantage relative to small cohorts. The former experience more competition in social and economic life, producing more so-called failures. The large baby boom cohort has been marked by relatively high suicide rates. It is anticipated that when this cohort retires, the elderly suicide rates will increase accordingly (Conwell et al., 2002). In contrast, the recent fall in elderly suicide rates is related to the advantageous characteristics of members of the Great Depression (1929–1939) birth cohort, a relatively small birth cohort.

## NEW DIRECTIONS IN RESEARCH

Directions for future research in this area include those involving prevention, assisted suicide, and suicide ideation.

**Prevention** Approximately 40% of elderly persons who committed suicide reportedly saw a physician during the last month of life, a figure much greater than that for nonelderly suicides. The potential for suicide prevention, then, through physician screening for depression, is higher for the elderly than the nonelderly populations (Harwood & Jacoby, 2002). The most common method of elderly suicide is by use of firearms.

**Assisted Suicide** Elderly suicide rates may increase as assisted suicide becomes more widely available. In physician-assisted suicide, a physician provides the means of suicide, which are then employed by the patient. Physician-assisted suicide first became legal in Oregon in the late 1990s. Physicians provide a prescription for a lethal drug, which the patient then obtains and uses for the suicide. However, there is no evidence that rates of physician-assisted suicide are increasing in the Netherlands, the first nation that legalized physician-assisted suicide (Harwood & Jacoby, 2002).

**Suicide Ideation** Suicide ideation refers to talking about the idea of taking one's own life. The predictors of suicide ideation among the elderly are similar to the predictors of completed suicide. Depression is the main predictor of such suicidal thinking. Other antecedents include physical disability, pain, and visual and hearing impairment. Social isolation indicators, such as divorce and widowhood, also foster suicide ideation. In turn, suicide ideation is the best single predictor of suicide among the elderly. However, this association may reflect a spurious statistical relationship. Depression predicts both ideation and completed suicide. It is very common to think about suicide before completing it.

Toll-free state and national suicide hotlines are available to the general public at any time. The effectiveness of these and other policy interventions on preventing elderly suicide is difficult to ascertain and is largely unknown. A web page with helpful information on prevention is provided by the American Association of Suicidology (2008).

**SEE ALSO** Volume 3: *Chronic Illness, Adulthood and Later Life; Death and Dying; Mental Health, Later Life; Mortality; Social Integration/Isolation, Later Life.*

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***Steven Stack***

# T

## TECHHNOLOGY USE, LATER LIFE

**SEE** Volume 3: *Media and Technology Use, Later Life.*

## THEORIES OF AGING

Social gerontology is a multidisciplinary field grounded in the sociology of aging and life course but informed by psychology, demography, epidemiology, anthropology, economics, history, and the humanities, among other disciplines. A central aim of social gerontology since its inception has been to understand and improve the lives of older adults. Thus social gerontologists are interested in the impact of socioeconomic, political, and cultural forces and conditions on the processes of aging and in the statuses and well-being of older people. Social gerontology explores the ways in which the older population and the diversity of the aging experience affect and are affected effected by social structures. Research in social gerontology addresses many domains of social life and behavior, including family relationships, health and disability, and older adults' social participation. Social gerontologists are also interested in social inequality across the life course, the unequal treatment of older people, and the deleterious effects of ageism. The recognition of diversity and inequality has been crucial to the development of the field and are incorporated in theory and practice.

This entry reviews current theoretical developments in social gerontology and the sociology of aging. Presented here are the field's major theories or theoretical perspectives, each theory's intellectual origins, what the theory tries to explain, the theory's key concepts, and how the theory has been used in recent research. Before discussing specific theories, however, it is useful to provide some background on what is meant by theory in social gerontology, the history of theorizing in this field, and issues of epistemology (approaches to knowledge) as they relate to the underlying assumptions of different theoretical perspectives. The challenges of theory building are also discussed, including the reluctance of researchers to integrate data with theory and synthesize theoretical insights with existing knowledge, or to pay attention to theory at all.

### WHAT THEORY IS

Theory refers to the construction of explicit explanations that account for empirical findings. Theories of aging help to systematize what is known, explain the *how* and *why* behind the *what* of data, and change the existing order to solve problems, such as age-related disabilities or lack of income security. The systematic progression of knowledge (i.e., explanation) over time is the standard by which any field of scholarly or scientific research is judged. If empirical results are not presented within the context of more general explanations or theory, the process of building, revising, and interpreting how and why phenomena occur is limited. It is through the ability to explain specific empirical findings with more general theories that knowledge develops.

In building theory, researchers rely on previous explanations of behavior that have been organized and

ordered in some way. Whenever researchers begin a project, they are operating under some implicit theory about how a set of phenomena may be related, and these expectations or hunches are derived from previous explanations. Yet too often research agendas proceed without any stated theory about how things work. Especially in the area of public policy applications or program interventions in gerontology, it is crucial to specify the theoretical assumptions of a research investigation or program intervention before investing large sums of money in it. If the theory is inadequate, it is unlikely the research intervention program or public policy will achieve its objectives. If the research findings are not backed by tested theoretical assumptions, then it is difficult to judge whether an intervention policy is grounded in supportable assumptions about why things happen.

## WHAT GERONTOLOGISTS NEED TO EXPLAIN

Social gerontologists focus on three sets of issues as they attempt to analyze and understand the phenomena of aging (Bengtson, Rice, & Johnson, 1999). The first set concerns the aged: the population of those who can be categorized as elderly in terms of their actual or expected life span. Most gerontological research in decades leading up to the 21st century has focused on the functional problems of aged populations, seen in human terms as medical disability or barriers to independent living. A second set of issues focuses on aging as a developmental process. Here the principal interest is in the situations and problems that accumulate during the life span and cannot be understood separate from developmental experiences and processes across a lifetime. A third set of issues involves the study of age as a dimension of structure and behavior within species. Social gerontologists are interested in how social organizations are created and changed in response to age-related patterns of birth, socialization, role transitions, and retirement or death. The phenomena to be explained relate to how institutions such as labor markets, retirement and pension systems, health care organizations, and political institutions take into account or deal with age. Although these three emphases are quite different in focus and inquiry, they are nonetheless interrelated in social gerontological research and practice. Theoretical engagement helps to distinguish among these basic categories of interest.

## CHALLENGES IN THEORY DEVELOPMENT

The field of social gerontology has accumulated many findings and has developed several important traditions of theory. Yet analysis of published findings in aging research suggests many researchers and practitioners are relatively unconcerned about theories of aging (Bengtson, Burgess, & Parrott, 1997). In social gerontology of the early 21st century, there are several problems that impede theory building and the development of a corpus of cumulative knowledge. First is the problem of tacit assumptions. Social gerontologists approach their research or study with certain assumptions and tacit theoretical orientations, even if not made explicit. In their eagerness to exploit new data sources and analytic techniques and generate findings for the solution of the problems associated with aging, researchers often neglect to clearly spell out their theoretical assumptions. One of the purposes that theories on aging should achieve is to lay out these tacit assumptions and orientations in an explicit and systematic way.

A second problem is reducing theory to empirical generalizations. Skepticism about the importance of theory as well as the proliferation of single-aspect research, which tends to lack theoretical grounding, has led some gerontology researchers to substitute empirical generalization for theory. Propositional statements based on empirical generalizations are about specific events in particular empirical settings rather than about more general processes that occur across a range of contexts. Often empirical generalizations are little more than summaries of research findings that require a theory to explain them. There is a need to raise these empirical generalizations to the level of explanation.

A third problem concerns disciplinary boundaries. Social gerontology has evolved into a broad academic enterprise. In addition to sociology, the fields of social psychology and psychology, demography, anthropology, political science, epidemiology, history, and the humanities are represented among social gerontology researchers. The field of social gerontology itself is in need of integration, because so many more factors are now recognized to be involved in human aging (Birren, 1999). For the mountains of data to yield significant new insights, an integrating framework is essential. However, this cannot be done without theories and concepts that are broader and more general in scope. This lack of integration in theories of aging is also an artifact of disciplinary specialization. The various disciplines study a growing diversity of outcomes; hence there is little overlap in theoretical explanations. This poses a further challenge for integrating theory and findings across the sciences when distinct areas of inquiry pursue knowledge under different epistemological assumptions.

A fourth issue, although not necessarily a problem, is to recognize that theory development is also a social enterprise. It has long been observed that science is a social endeavor that cannot be separated from social and professional considerations (Kuhn, 1962). Science reflects the concerns, careers, and competitiveness of collective groups

of practitioners. Moreover, like the aging process itself, theoretical development processes—and the explanations that ensue—are embedded in institutional and historical contexts. W. Andrew Achenbaum (1995) observed how the development of gerontological theories paralleled the historical construction of gerontology around new scientific methods and medical practices. Not surprisingly, the biomedicalization of aging remains a guiding research paradigm. One must be mindful of the connections between scientific inquiry and the social milieu at particular points in time that influence how a subject matter is conceived. Since the mid-1908s, interpretive and critical social gerontologists have called attention to these connections (Hendricks & Achenbaum, 1999), cautioning researchers to be more reflective on their own values or biases as they interpret findings, develop explanations, and make policy recommendations.

## THE STRUCTURE OF THEORIES IN SOCIAL GERONTOLOGY

Theories in social gerontology differ in several respects: (a) their underlying assumptions (particularly about human nature—specifically, whether human behavior is essentially determined, and thus predictable, or whether individuals are essentially creative and agentic, that is, producers of the social world); (b) their subject matter (reflecting specific disciplinary interests, or whether the focus is on macro-level institutions or on micro-level interactions); (c) their epistemological approach (positivistic, interpretive, or critical); (d) their methodological approach (deductive or inductive); and (e) their ultimate objectives (whether they aim largely to describe things, explain or even predict them, or change the way things are).

The classical definition of a scientific theory is essentially a deductive one, starting with definitions of general concepts and putting forward a number of logically ordered propositions about the relationships among concepts. Concepts are the building blocks of theory. Concepts are linked to empirical phenomena through operational definitions, from which hypotheses are derived and then tested against empirical observations. A general theory allows researchers to logically deduce a number of fairly specific statements, or explanations, about the nature and behavior of a large class of phenomena. Because such theories are useful in predicting and hence manipulating people's environments, they are considered essential for the design of programs aimed at ameliorating problems associated with aging, especially by government funding agencies. Some researchers have generated explanations of aging phenomena using inductive or grounded theoretical approaches (Strauss & Corbin, 1990) and qualitative methods, starting with the data and leading into the final stages of analysis to the emergence of key concepts and how they relate to one another. Research using quantitative methods can also proceed inductively, starting with data and developing theory.

Mainstream gerontological research is scientific in its approach to knowledge. However, interpretive and critical perspectives and qualitative and narrative methods have become more common. In modern social gerontology there is debate over positivistic approaches where knowledge is gained from the scientific method, or whether social theories can be scientific at all. Many social gerontologists believe there are nonscientific ways to look at, interpret, and develop knowledge about aging. Researchers using interpretive approaches, as opposed to positivistic approaches, focus on describing and understanding how social interactions proceed and on the subjective meanings of age and aging phenomena. From this perspective, a theory is useful to the extent that it provides a deeper understanding of particular social events and settings (Gubrium & Holstein, 1999). The assumption is that individuals are active agents and can change the nature of their social environments. Thus there cannot be general theories of aging reflecting fixed or natural laws of human social organization (Turner, 2003).

The critical theory perspective questions positivism and the search for scientific natural laws as a principal source of knowledge. Within this perspective, the understanding of meanings and the analysis of power and domination and the constraints imposed by social structures or forces are termed *critical knowledge*. Critical knowledge is equally as important as objective knowledge in understanding phenomena (Bengtson et al., 1997).

## DEBATES OVER EPISTEMOLOGY

To understand the controversies in social gerontology surrounding forms of knowledge and the use of theory, one must concern themselves with epistemology: *how one knows what they think they know*. Is there a reality out there? Are social phenomena real facts? Or is reality itself socially constructed through the collaborative definitional and meaning-sharing activities of people who observe it (Marshall, 1999)? Critical theorists note that values cannot be separated from facts and that all research is value-laden. Such concerns are metatheoretical, and they have been the subject of a great deal of debate in recent years among scholars in social gerontology. Metatheories—technically, theories of theories—are concerned with more fundamental epistemological and metaphysical questions addressing such things as the nature of human activity about which humans must develop theory; the basic nature of human beings or the fundamental nature of society; or the appropriate way to develop theory and what kind of theory is possible, such as scientific theories,

interpretative frameworks, general concepts that sensitize and orient, or critical approaches (Turner, 2003).

Because they are incommensurate, perhaps one effective way to deal with these issues in social gerontology is to regard each perspective as providing different lenses to address the different problems at hand, thereby enriching one's understanding of the multiple facets of aging. It should be remembered, however, that although scientific, interpretive, and critical approaches to knowledge are different in their objectives and methods, all of these theoretical approaches do involve a set of concepts, which are the building blocks of any theory. Increasingly, scholars in social gerontology are weighing the prospect of finding a common currency of ideas and concepts that would allow a synthesis to emerge.

## EARLY THEORIZING IN SOCIAL GERONTOLOGY

In gerontology's short history, considerable intellectual effort has been invested in theory development. Early researchers on aging, such as Granville Stanley Hall (1844–1924), Edmund Cowdry (1888–1975), Ralph Linton (1893–1953), Talcott Parsons (1902–1979), and Robert Havighurst (1900–1991), integrated empirical findings into theoretical insights and established the foundations of gerontology. As social gerontology developed in the post–World War II (1939–1945) period, it drew theoretical insights from the prevailing theoretical paradigm of the time, structural functionalism and symbolic interactionism, and later Marxism and rational choice.

**Disengagement Theory** Drawn from structural functionalism, disengagement theory was the first explicitly scientific theory of aging (Cumming & Henry, 1961). This theory attempted to explain age-related decreases in social interaction, psychological involvement, and the supposedly inevitable process of aging individuals withdrawing from society. The theory postulated that aging individuals and social structures would mutually disengage as individuals approached death, an adaptation seen as beneficial for the individual and society. This general theory of aging was elegant, multidisciplinary, parsimonious, and intuitively provocative (Achenbaum & Bengtson, 1994). However, its ambitious propositions were roundly criticized (Hochschild, 1975), particularly its unfalsifiability claims. The theory had attempted to explain both macro- and micro-level changes with one grand theory, but when tested against the cited data, its validity and generalizability claims could not be supported. Whereas many older people do appear to disengage or withdraw from their social connections and activities, many do not. One outcome of the profound criticism of disengagement theory was to curtail further attempts to develop a general theory of aging. Nevertheless, disengagement theory had a significant effect in social gerontology by prompting development of alternative theories of aging, particularly activity theory.

**Activity Theory** An implicit theory in gerontology for decades, activity theory was formalized by Bruce Lemon, Vern Bengtson, and James Peterson (1972) in response to the challenge posed by disengagement theory. Based on symbolic interactionism, activity theory postulates that older people who are more active will be more satisfied with their lives. Activity theory places strong emphasis on ongoing social interaction in the development of self-concept. It argues that one's self-concept is related to one's roles and that with old age comes a loss of roles (e.g., retirement and widowhood). In order to maintain a positive sense of self, older persons must substitute new roles for those lost in old age. Well-being in late life results from increased activity in newly acquired roles. Activity theory provides a conceptual justification for a central assumption underlying many programs and interventions for the elderly—that social activity in and of itself is beneficial and results in greater life satisfaction. Activity theory has received considerable empirical support but is vulnerable to several criticisms. First, the theory assumes that all older persons need and desire high levels of social activity. Some older people may prefer to be couch potatoes. Second, the theory overlooks variations in the meaning of particular activities in the lives of older people. The ideas of activity theory can be readily discerned in the more recent *successful aging* paradigm put forth by John Rowe and Robert Kahn in 1998. Not unlike activity theory, successful aging has been criticized for its excessive individualism and its discounting of social diversity and inequalities (Schmeeckle & Bengtson, 1999).

**Modernization Theory** As formulated by Donald Cowgill (1974), modernization theory attempts to explain variations in age status both historically and across societies. Its historical roots are in structural functionalism. Focusing on the macrostructural conditions of older adults in different sociocultural settings, the theory postulates that the status of the aged is inversely related to the level of societal industrialization. Whereas the elderly held high status in preindustrial societies as a result of their control of scarce resources and their knowledge of tradition, they have lower status in present industrialized societies. Four elements of industrialization are implicated in the reduced status of older people: economic technology, urbanization, mass education, and health technology. Modernization theory is elegant and parsimonious in capturing the general socioeconomic processes as they

relate to the status of the aged; yet like most general theories, it cannot be documented empirically except at the most superficial levels. For example, historical research examining the loss of authority of elders, timing and sequencing of proportion of the aged, and the appearance of retirement are at variance with tenets of modernization theory. Although no longer used as a general explanation of the status of the aged, it has been applied in more narrowly defined settings, such as in Isabella Aboderin's (2004) qualitative study of the intergenerational relations and the status of elders under conditions of poverty in urban Ghana in the late 1990s.

**Social Competence and Breakdown Theory** Social competence and breakdown theory attempts to explore both normal and problematic aspects of aging. Based on symbolic interactionism, Joseph Kuypers and Vern Bengtson (1973) sought to explain the negative consequences that can accompany crises that often occur with advancing age. They conceptualized how a negative spiral of feedback can occur: (1) an elderly individual, whose self-concept may already be vulnerable because of role loss or negative stereotypes concerning aging, experiences a health-related crisis; (2) experiencing a health-related crisis leads to labeling of the older person as dependent by the social environment—health professionals or family; (3) atrophy of previous competency skills occurs; and (4) the individual adopts the self-concept of being sick, inadequate, or incompetent. This leads to further vulnerability, leading to another negative cycle and further negative consequences for social and psychological competence. The process can be reversed and competence promoted by providing improved environmental supports while facilitating expression of personal strength. Although useful for sensitizing practitioners in dealing with the problems of aging, the social competence and breakdown model has yet to be tested in empirical studies.

## CONTEMPORARY THEORIES IN SOCIAL GERONTOLOGY

Additional theories emerged in a second period of theorizing in social gerontology and the sociology of aging, including the political economy of aging perspective (Estes, Gerard, Jones, & Swan, 1984), which draws from Marxist thinking and conflict theory in sociology and exchange theory (Dowd, 1975), a rational choice perspective. Since the late 1980s, these theories, as well as earlier theories (activity and modernization theories), have been refined and reformulated, and new theoretical perspectives have emerged. Prominent among the latter are the life course perspective, cumulative advantage and disadvantage theory, and socioemotional selectivity theory. In reviewing theory development in social gerontology, Jon Hendricks (1992) suggested more recent theoretical work reflects an effort to synthesize the distinct micro- or macro-level approaches of earlier theorizing. Also, there has been a shift among a subgroup of social gerontologist toward socially constructed and ideological considerations in theoretical conceptualizing. The growing presence in the field of social constructivism, critical perspectives, feminist theories of aging, political economy of aging perspectives, and postmodernist perspectives reflects this trend.

**The Age Stratification (Age and Society) Theory** This perspective represents one of the oldest traditions of macro-level theorizing in social gerontology. Matilda Riley, Anne Foner, and Joan Waring (1988) traced this perspective's intellectual roots to structural functionalism, particularly the works of sociologists Pitirim Sorokin (1889–1968), Karl Mannheim (1893–1947), and, later, Parsons. This theory seeks to explain (a) cohort flow, or the movement of different age cohorts across time in order to identify similarities and differences between them; (b) the interdependence of age cohorts and social structures; and (c) the asynchrony between structural and individual change over time. Its major concepts are age cohorts, age roles, age-graded social structures, age segregation or integration, and structural lag. Structural lag occurs when social structures cannot keep pace with the changes in population dynamics and individual lives.

Since the late 1980s, Riley and colleagues have refined this perspective, now referred to as the *age and society paradigm*. A current example of structural lag is the discordance between the increasing needs of elderly parents for caregiving support, concurrent reductions in state resources to provide long-term care services, and the resultant increased demands placed on families to provide parent care even as adult children are less able to do so because of employment demands. Using this theoretical perspective, Riley and Karyn Loscocco (1994) argued that a more age-integrated society brought about by policy changes can compensate for structural lag. Restructuring the social institutions of work, education, and the family through such things as extended time off for education or family, for example, can bring social structures in balance with individuals' lives.

**Life Course Theory** This perspective is perhaps the most widely cited theoretical framework in social gerontology in the early 21st century. Its proponents argue that to understand the present circumstances of older adults, one must take into account the major social and psychological forces that have operated throughout the course of their lives (George, 1996). Although there is debate as to whether the life course is a theory or an orienting perspective, it represents a convergence of thinking in

sociology and psychology about processes at both macro- and micro-social levels of analysis and for both populations and individuals over time. This multidisciplinary perspective draws content and methods from sociology, psychology, anthropology, and history. Researchers using this perspective are attempting to explain (a) the dynamic nature, context, and process of aging; (b) age-related transitions and life trajectories; (c) how aging is related to and shaped by social contexts, cultural meanings, and social structural location; and (d) how time, period, and cohort shape the aging process for individuals as well as for social groups (Bengston & Allen, 1993; Elder & Johnson, 2003). Although studies so far have not incorporated all four of these life course perspective dimensions in their empirical analyses, new methodological advances suggest such a multilevel, cross-time model in the future.

Glen Elder and Monica Johnson (2003) identified five basic principles that guide life course research. The first is that *development and aging are lifelong processes*; relationships, events, and processes of earlier life stages have consequences for later life relationships, processes, and outcomes. The second principle concerns the *interdependence of lives over time*, especially in the family, where individuals are linked across generations by bonds of kinship and processes of intergenerational transmission. For example, economic declines can have reverberating effects on the interconnected life paths of family members. The third principle concerns *agency* in human development and the idea that individuals make choices within the constraints of social structures and historical conditions. The fourth principle concerns the impact of *history and place* on aging. Researchers now recognize the necessity of nesting individual lives and family processes in social and historical contexts. A fifth principle emphasizes *historical time*, the importance of transitions and their timing relative to structural and historical contexts. There can be "a best fit" in the timing of individual development and family life stage and their temporal convergence with structural and historically created opportunities.

**Cumulative Advantage and Disadvantage Theory** Cumulative advantage and disadvantage theory applies a life course approach to the analysis of stratification among the aged. The theory seeks to explain how inequality in old age is produced. The theory derives from Robert Merton's (1988) original observation of the *Matthew effect* on scientific careers. As applied to the status of older people, the metaphor implies that those already advantaged (across a range of domains, such as health or wealth) will accumulate more benefits, whereas those who are disadvantaged early will accumulate more loss. In the 1970s and 1980s, two themes emerged in social gerontology that the cumulative advantage and disadvantage perspective was uniquely positioned to examine: the heterogeneity or diversity of older persons and the poverty and inequality among the aged. A central concept is intracohort heterogeneity. Structural or institutional arrangements operate to stratify cohorts as they allocate differential opportunities for the accumulation of value and reward. Inequality is seen as the product of institutional arrangement as well as aggregated individual actions over time. People who begin in a position of social advantage generally are better positioned to acquire additional resources than those who begin life at the bottom of the stratification system (Quadagno & Reid, 1999). It is important to explain the within-cohort differences over time along significant life course trajectories in terms of health, family, work, income, and wealth.

There are, however, flaws in this theory according to some researchers. In expanding the scope of cumulative advantage and disadvantage theory, Kenneth Ferraro, Tetyana Shippee, and Markus Schafer (in press) argue that accumulating advantage is not necessarily oppositional to accumulating disadvantage. Cumulative advantage and disadvantage theory ignores power relationships that determine how resources are allocated. A political economy of aging perspective would counter the idea of attributing inequality to structural arrangements and constraints and argue instead that inequality is the product of economic and political forces and power arrangements. Finally, the perspective as currently conceptualized makes no allowance for agency.

**Social Exchange Theory** This micro-level theory has been useful in many studies in social gerontology and the sociology of aging, particularly those focused on intergenerational social support and transfers. Developed and extended by James Dowd's "Aging as Exchange" in 1975, the social exchange theory of aging draws from sociological formulations by George Homans (1910–1989) and Peter Blau (1918–2002) and work in economics that assumes a rational choice model of decision-making behavior. The positivist tradition underlies this perspective; the interpretation of exchange events is not considered. Applied to aging, this perspective attempts to account for exchange behavior between individuals of different ages as a result of the shift in roles, skills, and resources that accompany advancing age. It explicitly incorporates the concept of power differentials. A central assumption here is that the various actors (such as parent and child or elder and youth) each bring resources to the interaction or exchange and that resources need not be material and will most likely be unequal. A second assumption is that the actors will only continue to engage

in the exchanges for as long as the benefits are greater than the costs and while there are no better alternatives.

This theoretical approach also assumes that exchanges are governed by norms of reciprocity—that is, when a person gives something, he or she trusts that something of equal value will be reciprocated. A major contribution of the theory is its ability to explain exchanges of contact and social support as well as how these exchanges are influenced by emotional, social, or financial report. However, simplistic formulations of social exchange theory may ignore the fact that many interactions are not driven solely by rationality but rather by irrational motivations such as altruism or affection. Also, the theory is premised on the assumption of an imbalance in the relative power of the parties to the exchange. Finally, in contrast to social constructionist theories, the quality and the meaning of the exchange are ignored.

**Continuity Theory** Continuity theory (Atchley, 1989) proposes that despite some disruptions of established roles and behavior patterns across the life span, individuals are inclined to maintain as much as possible the same habits, personalities, and lifestyles they developed in earlier years. Individuals are also predisposed to continue many activities and major tasks into older age. Further, individuals in later life make adaptations that allow them to gain a sense of continuity between the past and the present. The theory posits that it is this sense of continuity across the life span that contributes to well-being in later life. Continuity theory's implicit reference to trajectories and their constitutive roles, identities, values, and behaviors across life stages finds parallels in aspects of the life course perspective. Assumptions contained in a person's perceptions of the meaning of time—their own constructions or culture-bounded views—may call into question the usefulness of continuity theory. Gary Kenyon, Jan-Eric Ruth, and Wilhelm Mader (1999) questioned whether continuity theory is about aging per se or whether it reflects a cohort, cultural, or period effect based on an unexamined belief in a linear view of time.

**Life Span Development Theory** Life span development theory is one of the most widely cited explanatory frameworks in the psychology of aging as well as social gerontology. The framework conceptualizes ontogenetic development as biologically and socially constituted and as manifesting both developmental universals (homogeneity) and interindividual variability (e.g., differences in genetics and in social class). This perspective also proposes that the second half of life is characterized by significant individual differentiation, multidirectionality, and intraindividual plasticity or adaptability. Using the life span development perspective, Paul Baltes and Jacqui Smith (1999) identified three principles regulating the dynamics between biology and culture across the ontogenetic life span: First, evolutionary selection benefits decrease with age; second, the need for culture increases with age; and third, the efficacy of culture decreases with age. Their focus is on how these dynamics contribute to the optimal expression of human development and the production of outcomes of adaptive fitness. Drawing from evolutionary theory and ontogenetic theories of learning, Baltes and Smith also postulated that a condition of loss, limitation, or deficit could play a catalytic role for positive change.

**Selective Optimization with Compensation Theory** Life span development theory has produced one overall theory to explain how individuals manage adaptive (successful) development in later life. The theory identifies three fundamental mechanisms or strategies: selection, optimization, and compensation (Baltes & Carstensen, 1999). This is a model of psychological and behavioral adaptation in which the central focus is on managing the dynamics between gains and losses as one ages. Selection refers to the increasing restriction of an individual's life to fewer domains of functioning because of age-related loss in the range of adaptive potential. Optimization reflects the idea that people engage in behaviors that augment or enrich their general reserves and maximize their chosen life courses. Like selection, compensation results from restriction of the range of adaptive potential and becomes operative when specific behavioral capacities are lost or are reduced below a standard required for adequate functioning. This lifelong process of selective optimization with compensation enables people to age successfully.

**Socioemotional Selectivity Theory** In this theory, Laura Carstensen (1992) combined insights from developmental psychology—particularly the selective optimization with compensation model—with social exchange theory to explain why the social exchange and interaction networks of older persons are reduced over time (a phenomenon that disengagement theory tried to explain). Through mechanisms of socioemotional selectivity, individuals reduce interactions with some people as they age while increasing emotional closeness with significant others, such as an adult child or a sibling. Carstensen's theory provides a concise developmental-behavioral explanation for selective interaction in old age. This theory explains the change in social contact by the self-interested need for emotional closeness with significant others, which leads to increasingly selective interactions with others in advancing age. Such chosen interactions reflect the levels of reward these exchanges of emotional support achieve for older persons.

**Social Constructionist Theories** Social constructionist theories are among the more frequently cited perspectives in social gerontology. Social constructionist theories draw from a long tradition of micro-level analysis in the social sciences: symbolic interactionism (Mead, 1934), phenomenology (Berger & Luckmann, 1966), and ethnomethodology (Garfinkel, 1967). Using hermeneutic or interpretive methods, social constructionism focuses on individual agency and social behavior within larger structures of society and particularly on the subjective meanings of age and the aging experience. Key concepts of social constructionist theories of aging include social meaning, social realities, social relations, attitudes toward aging and the aged, and life events.

Researchers working in this tradition emphasize their interest in understanding, if not explaining, individual processes of aging as influenced by social definitions and social structures. Examples include Jaber Gubrium's 1993 study of the subjective meanings of quality of care and quality of life for residents of nursing homes and how each resident constructs meanings from her or his own experiences. These meanings emerge from analyses of life narratives but cannot be measured by predefined measurement scales, such as those used by most survey researchers. Sharon Kaufmann (1994) examined how frailty is socially produced through the interaction of older individuals, their caregivers, and their health professionals. One critique of social constructionist theories is that their micro-level focus obscures macro-level effects such as cohort, historical, and age stratification influences. As well, this perspective ignores structure and may minimize the role of power.

**Feminist Theories of Aging** Feminist theories of aging, or feminist gerontology, give priority to gender as an organizing principle for social life across the life span that significantly alters the experience of aging, often in inequitable ways (Calasanti, 1999). This theoretical perspective also challenges what counts as knowledge and how it functions in the lives of older women and men. Current theories and models of aging are regarded as insufficient because they fail to address gender relations, the experience of women in the context of aging and caregiving demands, or issues of race, ethnicity, or class. At the macro-level of analyses, feminist theories of aging combine with political economy and critical perspectives to examine differential access to the key material, health, and caring resources that substantially alters the experience of aging for women and men. For example, feminist researchers seek to explain the higher rates of poverty among older women compared to men and propose changes in the ideologies and institutions that perpetuate it. From a feminist perspective, family caregiving can be understood as an experience of obligation, structured by the gender-based division of domestic labor and the devaluing of unpaid work (Stroller, 1993). At the micro-level, feminist perspectives hold that gender should be examined in the context of social meanings, reflecting the influence of the social constructivist approach.

**Political Economy of Aging Theory** This perspective, which draws originally from Marxism (Marx, 1967), conflict theory (Simmel, 1966), and critical theory (Habermas, 1971), attempts to explain how the interaction of economic and political forces determines how social resources are allocated and how variations in the treatment and status of older adults can be understood by examining public policies, economic trends, and social structural factors (Estes, 2001). A political economy perspective applied to aging maintains that socioeconomic and political constraints shape the experience of aging, resulting in the loss of power, autonomy, and influence of older persons. Life experiences are seen as being patterned not only by age but also by class, gender, and race and ethnicity. These structural factors, often institutionalized or reinforced by economic and public policies, constrain opportunities, choices, and experiences of later life. Another focus of the political economy of aging perspective is how ageism is constructed and reproduced through social practices and policies and how it negatively affects the well-being of older people (Bytheway, 1995).

**Critical Theories of Aging** Critical perspectives are reflected in several theoretical trends in contemporary social gerontology, including the political economy of aging, feminist theories, theories of diversity, and humanistic gerontology. Coming primarily out of the Frankfurt School of Critical Theory (Habermas, 1971), and poststructuralism (Foucault, 1977), these perspectives share a common focus on criticizing the process of power as well as traditional positivistic approaches to knowledge. Critical gerontology has developed two distinct patterns, one that focuses on humanistic dimensions of aging and the other on structural components. Harry Moody (1993) postulated four goals of the humanistic strand of critical theory: (a) to theorize subjective and interpretive dimensions of aging, (b) to focus on praxis (involvement in practical change) instead of technical advancement, (c) to link academics and practitioners through praxis, and (d) to produce emancipatory knowledge.

A second strand emphasizes that critical gerontology should create positive models of aging focusing on the strengths and diversity of age, in addition to critiquing positivist knowledge (Bengtson et al., 1997). To reach the goals of critical gerontology, researchers focus on the key concepts of power, social action, and social meanings in examining the social aspects of age and aging. Social

constructionism, feminist theories, and critical perspectives have gained prominence in social gerontological theorizing, mirroring theoretical developments in sociology and the humanities. Not uncommonly, social gerontologists combine insights from all three perspectives to guide their research and interpret findings. At the same time, these theoretical perspectives pose a challenge to the scientific assumptions that have traditionally guided gerontological research.

**Postmodernist Theories** Postmodernist perspectives in aging, sometimes referred to as a postpositivist or post-Enlightenment perspective, follow the work of Michel Foucault (1926–1984), Jean-François Lyotard (1924–1998), and Richard Rorty (1931–2007). There are various strands of postmodernism (economic, feminist, cultural, and deconstructionist), but almost all challenge the Enlightenment's emphasis on individual freedom, rationality, progress, and the power of science to better the human condition. They see science and knowledge as inexorably linked to social control and power. Most postmodernists reject the canons of science; the assumption that reason can provide an objective, reliable, and universal foundation for knowledge; and the idea that reality has a unitary nature that can be definitively observed and understood. This position of extreme relativity toward truth causes postmodernists to challenge the relevance or even the possibility of theory. Postmodernism has been strongly attacked for its antitheoretical stance and for having provided a great deal of criticism of existing theory but offering little that can actually replace it. What postmodernism has contributed is to make social theorists aware of the limits of using a modern metaphor to understand contemporary circumstances and the limits of methodological approaches developed under the modernist metaphor (Pescosolido & Rubin, 2000).

## CONCLUSION

The goal in this entry was, first, to examine the state of theory and knowledge building in social gerontology and assess its prospects for future development and, second, to present an overview of the major theories in the field. Although theory development remains crucial from the perspective of science, many in social gerontology seem to question the importance, or even the validity, of theory. Others may see theorizing as an impediment to getting on with practical matters of solving the problems widely experienced by older people and their families.

In the quest to understand the diverse phenomena of aging, social gerontologists focus on three sets of issues: aging, the aged themselves, and age as a dimension of structure and social organization. Societal aging poses new problems for gerontologists. Developing knowledge that informs policies that can effectively deal with the challenges posed by growing numbers of elders will be crucial in the coming decades. There are good reasons for theory development in the field of social gerontology.

Yet theory development has lagged. This entry then identified specific problems that impede the development of theory and cumulative knowledge building. First, researchers need to make explicit their assumptions and theoretical orientations when presenting their results and interpretations. Second, there has been a proliferation of single aspect research findings—too frequently generated by overly narrow research inquiries—that lack theoretical grounding and explanation. There is a need to raise these empirical generalizations to an explanatory level and integrate explanations and understandings with previous knowledge and explanations. Third, there is the need to cross disciplinary boundaries and develop multidisciplinary and interdisciplinary causal explanations of broader theoretical scope. Fourth, researchers need to be more sensitive to the social dimensions of scholarly research and values that imbue paradigmatic frameworks, affecting the kinds of questions asked, the analytic approaches and methods chosen, and the interpretations put forth. This entry then provided an overview of the major theories in social gerontology.

In the 1990s and 2000s the scientific approach to knowledge in social gerontology has been criticized by those who espouse social constructionist or critical approaches. They argue that general explanatory laws cannot account for people's day-to-day experience and meanings and such laws are rendered impossible because of individual choice making. More fundamentally, critical and postmodernist theorists reject the Enlightenment ideals of reason and progress; they critique science as a source of subordination. Within social gerontology, debates over epistemology and the limitations of science and positivism continue.

Yet it may be possible to accommodate these seemingly incommensurate epistemological positions. Perhaps explanation and understanding in the complex field of social gerontology should draw from a range of theories and theoretical perspectives, depending on the problem at hand. This diversity of theoretical perspectives can offer complementary insights. However, in order for this to happen, it is important that researchers pay more attention to the accumulated knowledge of the field and to be explicit in their theoretical perspectives and insights. After all, there is nothing so practical as a good theory.

**SEE ALSO** Volume 3: *Bengtson, Vern; Baltes, Margret and Paul; Demographic Transition Theories; Epidemiologic Transition; Elder, Glen H., Jr.; Riley, Matilda White;*

Volume 2: *Marx, Karl; Social Structure; Sociological Theories.*

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# TIME USE, LATER LIFE

Time is an essential resource for older adults in modern life, particularly because they have so much of it. This especially applies to those older adults who can rely on pensions and retirement income, rather than working for pay. Indeed, most older adults lead lives that meet the classical definition of *leisure* by Greek philosophers, namely freedom from the necessity of work. Thus, older adults should expect to have maximal freedom in choosing how they spend their time, within the constraints posed by physical or financial limitations. Time is an important resource to examine because its management and the choices of activities people choose to occupy it with expresses their values and motivations across the life course. As illustrated here, one can also see how demographic and other factors seem to shape people's lives, such as becoming retired, providing elder care, or going to college.

## MEASURING PEOPLE'S TIME USE: TIME ESTIMATES VERSUS TIME DIARIES

There are two main types of data sources from which to infer patterns and trends in how time is spent: time estimates and time diaries. Most researchers have come to rely mainly on the more elaborate and comprehensive technique of the time diary, because with diaries, they can assess *all* daily activities—not merely individual work or free-time activities. Having equivalent measures for younger adults of working age further allows researchers to document how people's daily life changes as they retire or grow older.

**Bureau of Labor Statistics (BLS) Work Estimates** The BLS has the oldest time series of relevant data on employment status and work hours; some statistics date back 100 years or more. These data have advantages over more commonly used time diaries because they broaden one's understanding by (a) extending back to earlier points in

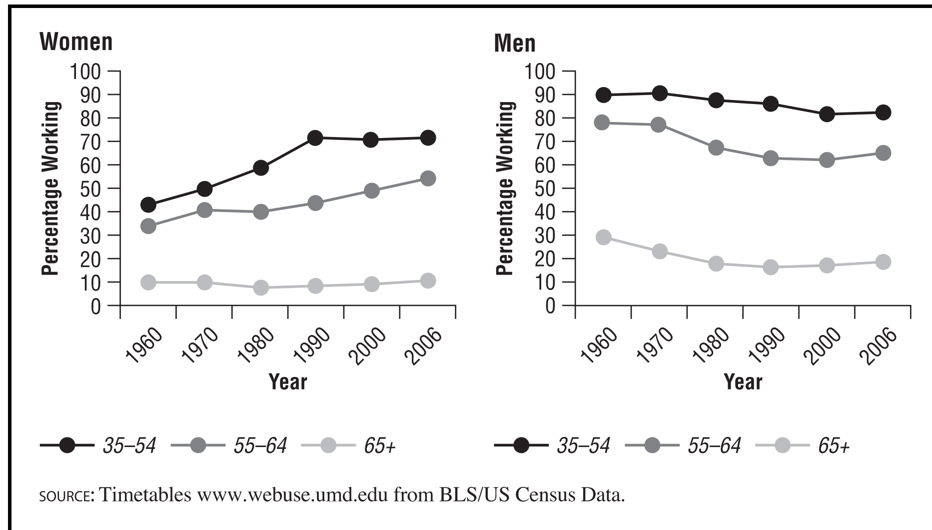


***Figure 1.*** *Changes in proportions working at a paid job by age: 1960–2006.* CENGAGE LEARNING, GALE.

history, (b) having larger sample sizes, and (c) covering specialized or more detailed activities. Figure 1 shows decennial trends in employment status since 1960, which documents the steady increases in the percentage of younger women employed in a given year (from 42.5% in 1960 to 71.5% in 2006 for those ages 35 to 54, and from 34% in 1960 to 54.5% in 2006 for those ages 55 to 64). In contrast, one sees steady declines for men (from 91% in 1960 to 84% in 2006 for those ages 35 to 54, and from 79% in 1960 to 66% in 2006 for those ages 55 to 64).

The contrasts for those past the nominal retirement age of 65 can be seen to be quite different, however. For older men, there is the decrease from a 29% employment rate in 1960 to 19% in 2006, but for older women, there is no change—the 10% in 1960 remained steady in 2006. Thus, current cohorts of older women are not taking part in the gendered work revolution evidenced among younger women, with their rate of being employed only half that of older men. Moreover, even those older women who do work put in less than half the work time (3 weekly hours) of senior employed men (8 hours).

**General Social Survey (GSS) Free-Time Activities** The GSS has been asking questions about older and younger people's participation in eight free time activities since 1972. These GSS data allow researchers to examine time-use trends since 1972 within age groups and patterns of change as one ages. Thus, it is possible to examine how older adults in the early 21st century are different than past generations of older adults and how they differ from younger age groups.

In the area of socializing, the GSS data show slight increases among older adults in visits with friends and with relatives but decreasing visits with neighbors and at bars—trends that mirror historical trends for adults under age 65. At the same time, the GSS participation rates in all four of these forms of socializing activity do decline as adults get older. By far, the greatest declines with age are found for sexual activity—from 36 occasions per year for those 55 to 64, to 18 occasions per year for those between 65 and 74, to 6 occasions per year for those 75 and older. Overall occasions of sex among older adults, however, have not declined since 1989.

GSS data on religious services attendance also show stark life course differences. Younger adults' participation has declined over the past 35 years, whereas attendance at religious services among older adults has remained fairly steady during this time period. However, religious attendance does also decline with advanced age, especially as older adults reach their mid-80s. Similarly, reading newspapers has not declined for older adults in their 60s and 70s, but it has declined dramatically for younger adults and declined only somewhat for persons in their 80s. In contrast, estimated TV viewing among older adults has increased slightly since the 1970s, and viewing is one activity that does increase with age into one's 80s.

## TIME DIARY STUDIES

In time-diary accounts, respondents are asked not to estimate or to make complex, vague, and changing calculations but to simply recall all of their activities sequentially for a specific period, usually the previous day. This mode of data collection generally takes 10 to 15 minutes

to complete over the telephone. This not only reduces the respondents' recall period and reporting burden but also ensures that the resulting account respects the zero-sum property of time; that is, activities must total to exactly 24 hours a day. For example, if time spent on paid work decreases, then it must be *zeroed out* by increases in time spent on other activities.

Considerable evidence supports the basic reliability and validity of such diary data. Various diary accounts are consistent with each other and with other ways of collecting time data (such as observational or "beeper" studies, in which respondents are paged electronically throughout the day, which have yet to be done with representative samples of older people). Indeed, the diary can be seen as a type of social microscope, offering unique insights into the minutiae of daily life, much as the biological microscope allowed scientists to examine aspects of life not earlier observable.

Moreover, in the process of collecting such data, researchers have been able to obtain detailed information about who participated in activities, what other activities were taking place at the same time (multitasking), where and when activities took place, and any number of other aspects of an activity (including how much people enjoy the activity). Time diaries provide the dynamic feature of watching everyday life unfold across the 24 hours of a typical day.

This is not to say that the diary is without flaws. Respondents can still distort, embellish, or even lie about what they do. Many, when asked to recall, simply cannot remember and may substitute a habitual activity (i.e., what they "usually" do) for what actually took place. The method also demands much time and effort from both interviewer and respondent, although survey respondents usually enjoy the process of spontaneously recalling their daily activities over the telephone once underway.

One of the controversies surrounding time-diary data collections is whether certain types of individuals (e.g., busy people) fail to respond to the diary. Robinson (1985) found that busier people (e.g., people who worked more or slept less or watched less TV) in an initial survey were actually *more* likely to participate in a follow-up diary survey. Gershuny (2000) similarly concluded that nonresponse was not associated with an individual's activity patterns.

**Scientific Support for the Time Diary Method** Time estimates from surveys may overestimate time spent in a variety of activities. For example, Verbrugge and Gruber-Baldine (1993) reported average estimated weekly activity totals of 187 hours (versus the 168 hours actually available in a week), and their list of activities did not include time for church-going, shopping, and adult education. In one national survey (Hawes, Talarzyk, & Blackwell, 1975), estimated weekly activities averaged more than 230 hours. Godbey and Chase (1983) found almost half of all respondents overestimated the actual number of times they used a fitness center by more than 100%, when compared to the center log-in records.

Past research has shown that time diary estimates of paid work hours are typically lower than survey estimates derived from the Current Population Survey (Robinson & Bostrom, 1994). Robinson and Gershuny found consistent overreporting of paid work hours by employed people not only in the United States but also in 10 other Western countries. Robinson and Godbey (1999) showed even more serious overestimation of time spent doing housework and doing volunteer activity and underestimation of time sleeping and free time. This is consistent with the hypothesis of social desirability bias so prominent in public opinion and attitude studies; this hypothesis holds that people will overstate their time spent on prestigious or socially valued activities and understate their time spent on activities associated with fun, relaxation, or laziness.

Older adults were not included in the first national diary study in 1965, but they were included in the subsequent national diary studies conducted in 1975, 1985, and between 1992 and 1995 (Robinson and Godbey, 1999). These later diary studies had modest sample sizes overall and small samples of older adults, in particular. In the annual American Time Use Survey (ATUS), which began in 2003 and is the most recent of the BLS diary surveys, more than 9,000 older adults have been interviewed. (The ATUS data from 2003 through 2005 are shown in Table 1.)

**Diary Patterns and Trends** Table 1 shows the ATUS activity times of men and women age 65 and older in comparison to two younger age groups, those age 55 through 64 and 35 through 54. Those in the age range between 55 and 64 may be seen as a transitional age group; they may be undergoing "anticipatory socialization" into the world of retirement. This middle-age group thus acts as a bridge between those aged 35 to 54 and those age 65 and older—the usual age of retirement.

Figure 1 first reveals the dramatic decline in older adults' time spent in paid work and commuting by 6 to 10 hours per week for those ages 55 to 64. This drops another 15 to 20 hours per week on average after age 64. These declines are mainly offset by increases in housework (4 hours more per week), sleep (4 hours more per week), TV watching (8 hours more per week), reading (5 hours more per week), hobbies (1 hour more per week), and relaxation (about 3 hours more per week). Activities that show smaller age-related increases are eating and

| Time Uses/ Activities (Age) | Women 35–54 | Women 55–64 | Women 65– | Age Diff. +/– | Men 35–54 | Men 55–64 | Men 65– | Age Diff. +/– |
|---|---|---|---|---|---|---|---|---|
| **A. CONTRACTED TIME** | | | | | | | | |
| 1. Paid Work | 25.4 | 19.8 | 3.3 | **–21** | 38.1 | 28.1 | 6.5 | **–32** |
| 2. Commute | 2.0 | 1.4 | 0.2 | **–2** | 3.1 | 2.4 | 0.5 | **–3** |
| 2x. Education | 0.9 | 0.4 | 0.3 | **–1** | 0.5 | 0.2 | 0.1 | **0** |
| **B. COMMITTED TIME** | | | | **–24** | | | | **–35** |
| 3. Housework | 17.8 | 19.0 | 23.0 | **+5** | 10.2 | 12.5 | 13.8 | **+4** |
| 4. Child care | 6.7 | 2.6 | 1.3 | **–5** | 3.5 | 1.2 | 0.8 | **–3** |
| 5. Shopping | 7.2 | 7.6 | 6.7 | **–1** | 4.7 | 5.0 | 6.3 | **+2** |
| **C. PERSONAL CARE** | | | | **–1** | | | | **+3** |
| 6. Sleeping | 58.5 | 58.3 | 62.3 | **+4** | 57.2 | 57.7 | 62.0 | **+5** |
| 7. Eating | 7.2 | 8.2 | 9.2 | **+2** | 8.0 | 9.3 | 10.2 | **+2** |
| 8. Grooming | 8.6 | 9.8 | 9.6 | **+1** | 6.6 | 7.3 | 8.2 | **+2** |
| **D. FREE TIME** | | | | **+7** | | | | **+9** |
| 9. Religion | 0.9 | 1.3 | 1.5 | **+1** | 0.7 | 0.8 | 1.1 | **0** |
| 10. Organizations | 1.8 | 1.7 | 2.1 | **0** | 1.3 | 1.3 | 1.9 | **+1** |
| 11. Social Events | 0.9 | 0.9 | 0.8 | **0** | 0.9 | 0.9 | 0.7 | **0** |
| 12. Visiting | 4.7 | 5.4 | 5.1 | **0** | 3.8 | 3.7 | 4.2 | **0** |
| 13. Fitness Activity | 1.3 | 1.1 | 1.1 | **0** | 2.0 | 2.3 | 2.2 | **0** |
| 14. Hobbies | 0.7 | 1.4 | 2.0 | **+1** | 0.8 | 1.1 | 2.0 | **+1** |
| 15. TV | 14.4 | 17.6 | 25.1 | **+11** | 18.7 | 22.2 | 29.3 | **+11** |
| 16. Radio/records | 0.2 | 0.2 | 0.5 | **0** | 0.5 | 0.4 | 0.7 | **0** |
| 17. Reading | 2.2 | 4.3 | 7.1 | **+5** | 1.7 | 3.0 | 6.7 | **+5** |
| 18. Home Comm. | 2.1 | 2.4 | 2.6 | **0** | 1.7 | 1.9 | 2.1 | **0** |
| 19. IT | 0.7 | 0.8 | 0.8 | **0** | 1.1 | 1.2 | 1.0 | **0** |
| 20. Rest/relax | 1.7 | 2.3 | 4.3 | **+3** | 2.0 | 2.9 | 5.5 | **+4** |
| 21. Free travel | 1.9 | 2.1 | 1.9 | **0** | 1.9 | 2.1 | 2.2 | **+3** |
| **E. TOTAL FREE** | **34.1** | **41.5** | **54.2** | **+20** | **36.6** | **43.5** | **59.6** | **+23** |
| 22. Total travel | 8.7 | 7.6 | 5.5 | **–3** | 7.7 | 7.8 | 6.4 | **–1** |

SOURCE : Timetables www.webuse.umd.edu based on BLS/US Census Data.

***Table 1.*** *Time/activity differences by age (in hours per week from 2003–2005).* CENGAGE LEARNING, GALE.

grooming. In addition to the work decline, there is the expected decline in the amount of time spent providing childcare. Thus, the main changes in free time are concentrated on TV, reading, and relaxing and hence do not generally extend to other free-time activities. No declines are found in organizational activity, fitness (sports) activities, or attending movies and other social events; however, total travel outside the home does decline, probably a function of the decreased need to commute to work.

Of particular interest to researchers is the increase in time spent doing housework for both older men and women. With fewer family members and smaller homes to care for, why would more time be devoted to housework in these empty-nest years? Even though married men's hours of housework and shopping increase from 10 to over 13 hours per week as they age, older married women continue to do almost two-thirds of the total housework.

Also of interest is the rather dramatic increase in TV viewing past retirement. Of the 20 or more hours of increased free time for those age 65 and older, about half of it is spent on TV. However, in percentage of free time, the increase in TV's share of free time only rises from 42% to 46% among women age 65 and older, whereas for men it declines slightly from 51% to 49%—thus closing the gender gap in TV viewing time.

Finally, it is important to note that many of the age differences in activity noted in Table 1 reflect differences not in age per se but in hours spent at work. When the increases in housework, sleep, TV, and reading are adjusted for this employment status, the age differences are almost a nonfactor. In other words, older adults who continue to work show activity patterns quite similar to workers under age 65.

**Differences by Background Factors** Among older adults, average paid work hours decline from 8 hours for those ages 65 to 72, to 3 hours for those between 73 and 79, to less than an hour for those 80 and older. Housework hours also decline but only slightly, from 18 hours to 15 hours for those 80 and older. Sleeping hours increase by about 5 hours, but only for those 85 and older, and TV, relaxing, and reading hours also increase—each by about 4 hours per week. Both free time and overall travel decline almost 4 hours past age 84.

Table 1 shows many of the same gender patterns as revealed among younger adults, as noted earlier in the finding for women's domination of housework (and

childcare). In contrast, older men continue to do two-thirds of the paid work. In terms of personal care, sleep hours of men and women remain virtually identical, whereas men spend more time eating and women more time grooming. Older men have about 5 more hours of free time than older women, almost all of which they devote to TV viewing, with more time spent exercising and relaxing as well. Even with less free time, older women manage to find slightly more free time for religion, organizational activity, socializing, and reading. Similar to observed racial differences among younger adults, older Blacks spend more time grooming, attending church, watching TV, and relaxing than older Whites, who in turn spend more time doing housework, eating, and reading than older Blacks.

In terms of role factors, the differences are less pronounced than for preretirement groups. Employed seniors spend 10 fewer hours per week watching TV, 3 hours less reading, and about an hour less time on hobbies and in home communication, compared to their nonworking peers. Married seniors work about 3 more hours, but they spend about 3 hours less time asleep or watching TV than those not married; there are no differences on housework or on other free time activities.

In terms of status factors, higher education and income are associated with spending twice as much time working compared to those with lower levels of education and income. There are no differences in time spent in housework, childcare, or shopping. College-educated and older adults in the highest income category spend 5 fewer hours per week sleeping than those with lower education and income, which is offset by 2 to 3 more hours eating meals but no notable difference in grooming time. As with adults under age 65, the most sizable free-time activity differences were found for media use, with the college-educated and highest income earners watching about 5 fewer hours of TV each week (again offset by 4 to 5 more hours reading and about an hour more of computer use). Higher educated and income groups also spend more of their free time traveling, including travel that is tied more to organizational meetings. They also spend less time relaxing.

**Historical Trends** Little time-diary data are available about historical trends in time use among older adults. Nonetheless, some fairly clear patterns emerge, and these generally parallel the trends shown in Table 1—patterns also noted in analyses conducted on these earlier diary studies of older adults (Robinson, 1997). Since between 1975 and 1985, changes among older adults have been concentrated in a few activities. Older adults sleep more then in the past (older women sleep 2 more hours and older men sleep 5 more hours per week). Older adults are also watching more television than in the past (3 to 5 more hours on average per week). These increases are offset by smaller decreases in a number of personal care and free-time activities such as eating, grooming, visiting, fitness activity, hobbies, and home communication. These results largely mirror those trends found among working-age persons. There is one important exception: No decline in housework time was documented among older adults.

## POLICY ISSUES AND TIME FOR OLDER ADULTS

As is true for people under age 65, time-diary coverage of all daily activity in a society might be thought to have far-reaching policy implications. However, it is difficult to develop policy interventions to adjust for time use and the potential health consequences thereof. For example, the National Sleep Foundation has raised general alarms about sleep deprivation as a national crisis. However, time-diary studies show no decrease in sleep since the late 1960s. National recommendations are holding steady at the recommended and legendary "8 hours a day" figure for older adults, as well as younger adults.

Readers and leisure advocates may be alarmed at the fact so much of older adults' free time is devoted to TV viewing, making them an ideal target for "Turn Off Your TV Week," which prompts people to leave their TVs off for one designated week each year and find more concentration, challenge, and gratification in other activities. Ironically, diary research suggests that although people rate TV in general as relatively low on the "fun meter" the programs they watched on the diary day rated far higher in enjoyment, actually above the levels for other free-time activities. Moreover, although viewing hours do rise dramatically for older adults, this rise does not equal the heavily increased proportion of free time that occurred when viewing hours for younger adults rose between 1965 and 1975.

Many policy ideas and findings about increasing the quality of daily lives of older people were brought out in the pioneering studies of Baldes and Baldes (1990), and future generations of social gerontologists and policy makers can draw insights from their efforts to weigh policy options to help optimize time use and daily life activities during the so-called golden years.

**SEE ALSO** Volume 3: *Leisure and Travel, Later Life; Volunteering, Later Life.*

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# V-W

## VISION PROBLEMS

SEE Volume 3: *Sensory Impairments.*

## VOLUNTEERING, LATER LIFE

Volunteering is a form of helping activity that occurs throughout the life course. Volunteering is considered by many observers to be an important activity for the support and vibrancy of local communities, for the well-being of individuals, and for maintaining the foundations of democracy in part because trust and norms of reciprocity are central to this form of government (Wilson & Musick, 1999). More than 150 years ago, Alexis de Tocqueville (1835–1840) was among the first to observe that the United States was replete with countless examples of selfless helping activity occurring within communities even while its people and its ethos heavily promoted individualism and self-sufficiency. This paradox remains a characteristic of American society today.

### DEFINING AND STUDYING VOLUNTEERING

Wilson (2000) defines volunteering as "any activity in which time is given freely to benefit another person, group, or organization" (p. 215). One advocacy group, the Independent Sector (2001), estimates that in the year 2000 the economic value of all types of formal and informal volunteering among persons in the United States was nearly $240 billion. Johnson and Schaner (2005) estimate that in 2002 persons age 55 and over contributed $162 billion, or $2,698 per person, worth of helping in the form of volunteering and unpaid help given to others. Older women provided about $3,000 worth of volunteering, on average, annually and older men provided about $2,400. They also estimate that the value of formal volunteering alone for this age group was $44 billion. Combining both formal and informal types of volunteering, these authors show that about three out of every four older persons provided some form of unpaid help. These data provide an economic benchmark for the valuable contributions that older persons make to American society.

The remainder of this entry focuses primarily on formal volunteering, typically structured through affiliation with a group or organization. Informal volunteering, or informal helping, as it is sometimes called, is help given to others in a person's social network without receiving pay. This type of helping tends to be unstructured and is geared toward relatives, friends, and neighbors.

### HISTORICAL AND DEMOGRAPHIC TRENDS

The number of people volunteering in the United States has fluctuated over time, causing some observers to express concern that Americans may be losing their civic consciousness. Nevertheless, volunteering among all age groups is relatively high in the United States. For example, between 1989 and 2005 volunteering among adults increased by 32%; most of this growth occurred among three age groups: older teenagers (16 to 19 years old),

middle-aged adults (45 to 64 years old), and older adults (65 years old and older) (Corporation for National and Community Service, 2006). These increases may be attributable to a renewed sense of community brought on by national tragedy (the 9/11 terrorists attacks) or to media coverage of national disasters, such as hurricanes and massive wildfires. As well, increased recruitment efforts among nonprofit organizations may explain some of the increase. Some characteristics unique to the current generation of older persons may also explain the increase, including rising average levels of education and income and generational differences in commitment to communities related to the historical context in which a person grew up (Corporation for National and Community Service, 2006).

Among the three age groups that are most likely to volunteer, older persons are somewhat less likely to volunteer than persons in the other two groups. In 2005 the proportions of volunteers for each age group were as follows: 23.5% for persons 65 years old and over, 30% for persons 45 to 64 years old, and 28.4% for persons 16 to 19 years old. Research confirms a curvilinear relationship between age and volunteering, whereby the likelihood of volunteering increases through young adulthood until reaching a high point in middle age where it then levels off with a slight downturn in later life due in part to reduced health resources among the elderly (Corporation for National and Community Service, 2006). Individuals in the age 65 and older group are nevertheless more likely than those in the other age groups to volunteer more than 100 hours annually.

In 2002, nearly 20 million persons over age 55 volunteered, and the average number of hours committed annually to volunteering among this age group was 169 (Zedlewski & Schaner, 2006). This same study, using nationally representative survey data of the U.S. population, demonstrated that more than 33% of those persons aged 65 to 75 who were not working were volunteers, and that for the same age group nearly 46% of persons who were working also volunteered. Persons who work, even those in the later stages of the life course, are more likely to volunteer than persons who do not work.

Among all age groups, Whites are the most likely to volunteer, followed by African Americans and Hispanics. In addition, married persons are more likely to volunteer than nonmarried persons, and part-time workers are more likely to volunteer than full-time workers or those who are unemployed. Finally, adults living with children, especially older children, contribute more volunteer activity than those living in households without children (Wilson, 2000).

People of all ages, including the elderly, volunteer for a range of organizations and groups, including religious organizations (45% of older volunteers did so for a religious group). Other organizations include civic and political groups, educational and cultural organizations, and other community organizations. Hospitals and other health care organizations are common sources of volunteer activity, but fewer than 11% of older persons volunteered in 2005 for these types of organizations (Corporation for National and Community Service, 2006).

## CENTRAL THEMES IN THE STUDY OF VOLUNTEERING

Studies on volunteering have centered around three themes: explanations of volunteering, the relationship between aging and volunteer activity, and the health benefits of volunteering. Explaining why people volunteer, irrespective of their age, is important both to scholars and to organizations that rely on volunteers in order to conduct their business (Wilson, 2000). Since the late 1980s social psychologists have spent considerable effort evaluating the motives that underlie volunteering activity. Some argue that volunteering is a learned activity in which the value of volunteering is taught to children by their parents and in schools; thus an intergenerational link commits people to a career in volunteering that often spans the life course. Research that employs values as a predictor of volunteer behavior has seen only limited success, in part because of the wide range of volunteer activities in which people engage and the varieties of meaning they attach to those activities.

Bradley (1999–2000) argues there are at least three categories of motivation for volunteering among older persons. The first is that volunteering provides a sense of purpose to one's life and allows older persons to give back to the community; this allows older people to make a difference while providing meaningful activity. The second category is personal growth; many older persons desire to pursue individual goals and interests such as increasing knowledge about a political issue or social problem and volunteering is one mechanism for achieving these goals. The third category is continued productivity. Volunteering for a formal organization provides structure in one's day (there is a reason to get up in the morning), and the volunteer accrues social rewards related to helping others (social status).

Some sociologists, economists, and gerontologists argue that volunteering is similar to any other form of work, except that it is unpaid. As with paid work, to be a volunteer requires skills that come from education and work experience. People with higher levels of education have more skills, and they are more likely to learn about or be aware of problems that need attention, and they are also more likely to be asked to volunteer. Having a job provides persons with a social network where civic skills may be learned and applied, yielding more volunteering

(Wilson, 2000). It has been hypothesized that when older persons retire from work, they might replace at least some of their paid work hours with unpaid volunteering hours (Chambre, 1984). Relatively little research evidence supports this idea. Instead, the evidence seems to show that persons who were volunteers before retirement are more likely to volunteer after retirement; in other words, there is continuity across the life course when it comes to volunteering rather than a substitution of one form of work for another (Mutchler, Burr, & Caro, 2003).

Another important factor in explaining volunteering behavior concerns the contribution of a person's social network and social relationships. The odds of volunteering increase for those persons who know a lot of other people; who are members of social, political, and professional organizations; and, as noted above, who have prior volunteering experience (Wilson 2000, p. 223). For the elderly, belonging to a religious organization is the most important conduit to the volunteer role because many volunteer opportunities occur within the context of the religious organization itself. Also, religious organizations provide a social network for learning about volunteering opportunities.

The relationship between aging and activity has a long history of investigation in the social sciences. When social scientists think about volunteering, they often consider it as falling under the umbrella of successful aging, which was given a renewed emphasis and attention by Rowe and Kahn (1998). One of the three important tenets of the successful aging paradigm is that older persons should remain active and engaged in their communities. Volunteering is certainly one mechanism for remaining active and engaged.

Two prominent theories of the relationship between activity of all kinds and aging yield diametrically different predictions. Activity theory suggests that as people age they will remain active within the limits of their health and functional status. Disengagement theory suggests that as people age they will remove themselves from many of the roles they once held and will eventually recede entirely from meaningful social pursuits. A relatively new theory called socioemotional selectivity offers a more nuanced way of framing the issue (Carstensen, 1992). This theory suggests that as people age they do reduce some of their social roles and the activities associated with these roles, but they choose among options available to them, deciding which activities to commit to and which to leave behind. Their choices are seen as being driven at least in part by those roles and activities that have the most meaning to them.

Hendricks and Cutler (2004) set out to investigate this possibility as it relates to volunteer activity and aging. From socioemotional selectivity theory, they hypothesize that as people move into the later stages of the life course they will reduce the number of volunteer activities in which they engage, and they will reduce the total number of hours of volunteering. They also hypothesize, however, that older persons will focus more intently on a few volunteer activities and commit significant amounts of time to just these few. Their results, based on national data generated by the U.S. Bureau of the Census, show just this. This research is intriguing but the analysis used cross-sectional data (data collected at a single point in time). To have greater confidence in these results, researchers will need to test these hypotheses with panel data; these are data that follow a group of individuals over relatively long periods of time.

In regard to the relationship between volunteering and health in later life, a growing body of research shows that there is a significant benefit to health and longevity for persons who volunteer, and this benefit appears to accrue most substantially to older persons (Corporation for National and Community Service, 2007a). Thus, volunteering in later life has positive effects not only for community and society but also for the volunteer. Of course, if volunteering improves the health status of older persons, as research shows, then this returns another benefit to society through reduced health care costs and the postponement of disability and dependency.

## PRODUCTIVE AGING

Social scientists have long been interested in studying social, leisure, and productive activities across the life course. Productive aging is defined as engaging in activity that produces socially valued goods and services, whether paid or not. Thus, working in the labor market for pay later in life would be one form of productive aging. Other forms include formal volunteering, providing care to persons with acute or chronic illness, child care (especially grandparenting), and informal helping (Bass & Caro, 2001). Some observers suggest that managing one's health through self-care and obtaining education later in life also are forms of productive aging. Productive aging itself falls under the rubric of successful aging (Rowe & Kahn, 1998). One of the three tenets of the successful aging paradigm is that older persons remain active and engaged in their communities. Engaging in productive activities is one way for older persons to maintain or increase their well-being.

***Pet Meals on Wheels.*** *Meals on Wheels volunteer Harriet Waring delivers pet food to a senior person's home in Fort Worth, TX. Meals on Wheels had recently started a nationwide program to provide seniors not only with meals but with pet food, because people were so needy they were feeding their meals to their dogs and cats.* AP IMAGES.

A significant amount of research shows that older persons who volunteer report higher levels of life satisfaction and happiness than persons who do not volunteer (e.g., Wheeler, Gorey, & Greenblatt, 1998). The effect is likely related to the sense of purpose that older persons find in their volunteer roles and their ability to act on their desire to give something back to members of their community, as discussed above. The number of depressive symptoms (e.g., feeling sad, inability to sleep or eat) is lower among persons who volunteer than among nonvolunteers (Wilson & Musick, 1999).

Based on data that observes persons at multiple points in time, research shows that volunteers experience higher levels of self-reported health and physical health (e.g., Lum & Lightfoot, 2005. Volunteers demonstrate higher levels of functional status (less disability) than nonvolunteers of a similar age. Evidence also shows that persons who volunteer have more social roles (e.g., worker, parent) and that more social roles leads to better health outcomes. Volunteering even appears to reduce the negative consequences of having undergone serious medical procedures and reduces chronic pain (Corporation for National and Community Service, 2007a).

A number of studies show that the risk of death is reduced for those who volunteer but that the positive effect may operate only for those older persons who volunteer a moderate amount compared to those who do not volunteer as well as those who devote a large amount of time to volunteering (e.g., Musick & Wilson, 1999). Thus a new hypothesis was developed called the threshold hypothesis suggesting that benefits do not accrue to individuals after a certain level of activity is achieved.

There are several reasons why volunteering has a positive effect on health and general well-being, especially among the elderly. First, being a volunteer provides a social network whereby information about healthy behavior and health care services may be enhanced. Also, these networks may provide a form of social support that

researchers believe helps to reduce the negative association between stress and health. Second, volunteering provides the volunteer with enhancements to their self-esteem and self-efficacy. These psychological attributes also help persons cope with stress. Third, older people may benefit more from volunteering than younger people because their volunteering is seen as discretionary, that is, older persons are able, when their personal resources allow, to choose volunteering activities that have intrinsic value for them (e.g., volunteering for a church or synagogue or for a cultural organization). By contrast, young and middle-aged adults often volunteer for activities that may seem obligatory to them, such as volunteering for a professional organization related to their work or for an organization that relates to their roles as parents, such as a school or sports team (Van Willigen, 2000).

## THE FUTURE OF VOLUNTEERING RESEARCH AND UNANSWERED QUESTIONS

By 2008 more than 70 million persons made up the baby boom generation (persons born between 1946 and 1964). In the year 2011 the leading edge of the baby boom generation will reach the normative age of retirement (age 65). What will this mean for the nation's need for motivated and skilled volunteers? Baby boomers are, on average, healthier and have more income and education than earlier generations of middle-aged persons, and many also have what may be called activist roots. Will this translate into more volunteer activity? Will boomers volunteer for the same types of activities as their parents, and will they volunteer with a greater or lesser commitment? Nonprofit organizations that rely on volunteers would like to have answers to these questions and scholars would like to know if their theories and research findings based on studies of previous generations of older volunteers will be relevant to this new generation of volunteers (Corporation for National and Community Service, 2007b). Fortunately, evidence shows that baby boomers volunteer more than members of other generations at the same point in the life course. Given that research shows that volunteers tend to age as volunteers, this is likely to translate into substantial volunteer effort in old age for the baby boomers.

More research is needed about the potential for older persons to volunteer, both in the current generation of older persons and for generations to follow. Is it possible that an untapped army of volunteers is out there waiting to be asked to help? Some evidence suggests this is the case, but many older people who might like to volunteer are constrained either by their health and functional status limitations or because they lack skills and experiences that many nonprofit organizations need. What would it take to get more elderly involved? Will such programs as Foster Grandparents and Senior Corps continue to be effective avenues for volunteer activity?

Little research exists comparing the volunteer activity, benefits of volunteering, and motivations for volunteering among different race and ethnic groups. Given the growth of Hispanic and Asian groups in the United States, heavily influenced by the process of rapid immigration, understanding the volunteering potential and experiences of persons from these groups has enormous importance for the well-being of the elderly and for society.

**SEE ALSO** Volume 3: *Religion and Spirituality, Later Life; Social Integration/Isolation, Later Life; Time Use, Later Life.*

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# WEALTH

Wealth is the value of property owned by a household at any time. It is usually measured as *net worth*, or total assets less total debts. Total assets include the family home, vacation homes, other real estate, vehicles, and other assets. This also includes financial assets such as savings accounts, checking accounts, stocks, bonds, mutual funds, and retirement accounts. Liabilities include mortgages, car loans, credit card debt, school loans, informal debt such as loan repayment to a friend or family member, and any other outstanding liabilities. Net financial assets, or *financial wealth*, is an alternative measure of wealth. Financial wealth is wealth that can be liquidated relatively easily for immediate use. Wealth is distinct from *income*, a flow of funds into the household from wages, salaries, government transfer payments (e.g., social security income), or investments. Studies of inequality and the distribution of financial well-being often focus on income and how income changes over time. However, wealth may be an even more important indicator of well-being because it provides both direct financial benefits and other advantages. Indeed, wealth is among the most fundamental indicators of well-being because it is relatively enduring and related in some way to most other measures of achievement (Keister 2000, 2005). It can improve educational attainment and occupational opportunities and can enhance political influence. It serves as a financial buffer against the loss of a primary breadwinner's income and provides needed resources in extreme circumstances such as a medical emergency or a natural disaster. Wealth can also be passed to future generations to extend these advantages indefinitely.

Wealth has been difficult to study until relatively recently because data on assets and debts have been limited. Wealth data are challenging to collect because most wealth is owned by a relatively small group of families who are not always willing to share information about their assets according to Seymour Spilerman (2000). As a result, Melvin L. Oliver & Thomas M. Shapiro (2006) point out, income data served as a proxy for wealth until wealth data became more widely available over the past three decades. Although surveys have made improvements in the collection of wealth information, some problems remain. It is still difficult to sample the wealthiest families and include respondents from hard-to-locate populations such as unemployed Black males (Oliver & Shapiro 2006). Some of the currently used sources of U.S. wealth data include the Panel Study of Income Dynamics (PSID), the Survey of Consumer Finances (SCF), and the Survey of Income and Program Participation (SIPP) (Keister & Moller 2000). The Luxembourg Wealth Study (LWS), launched in late 2007, contains standardized wealth data from ten countries and includes the 2001 SCF and PSID for the U.S.

## TRENDS IN WEALTH INEQUALITY

Although the benefits of wealth are significant, they are not enjoyed uniformly in the United States because asset ownership is highly concentrated (Keister 2000, 2005; Wolff 1998). Between 1995 and 2004 mean net worth increased 72% to $448,000, while the median increased only 31% to $93,000. In 2004 the top 1% of households owned 33% of net worth, and the top 10% owned 70% of net worth. The number of billionaires listed in the Forbes 400 has increased from about 95 in 1993 to 300 in 2000, and these families grew increasingly wealthy (Keister 2005). At the same time, 16% of households had zero or negative net worth, that is, their debts exceed their assets (Keister 2005; Bucks et al. 2006). The United States is also among the most unequal countries in terms of wealth ownership. While wealth inequality was consistently more severe in Europe for many decades, by the early 1990s the United States had surpassed all industrial societies in the extent of family wealth inequality. Estimates from the Survey of Financial Characteristics of Consumers (SFCC) and the SCF for 1964–2001 suggest a very small number of households in the United States have historically controlled the vast majority of household wealth (Keister 2005).

One promising finding suggests that the proportion of families owning some form of wealth increased to 97.9% and has risen continuously since 1995 with the exception of a slight halt in 2001 (Bucks et al. 2006). Asset ownership increased most for those at the lowest quintile of the wealth distribution, families with household heads under 35 or over 65 years old, for nonWhite or Hispanic families, families with a non-working head, renters, and families in the bottom quartile of the wealth distribution; asset ownership levels were already at nearly 100% for all other demographic groups. However, despite a rise in the ownership of any asset for these groups, most saw a decline in median value of all assets (Bucks et al. 2006).

Wealth mobility, or movement from one segment of the wealth distribution to another, is relatively rare. Researchers study both inter-generational (comparing parents and their children) and intra-generational mobility (observing changes in a person's wealth from early-life to later-life). The evidence suggests that significant wealth mobility has been rare since the early history of the United States. Modern patterns also provide evidence that wealth mobility is limited (see Keister 2005 for details on wealth mobility patterns). While it is relatively unlikely that any individual is going to make a large and significant change in wealth position, there is evidence that considerable wealth mobility does occur in the United States. In other words there are large numbers of people who make very large changes in their wealth status over time (Keister 2005). An important caveat is that much of the mobility that does occur does not constitute movement across great spans of the distribution.

## DETERMINANTS OF SAVING AND ACCUMULATION

While basic facts about the distribution of wealth have become taken for granted, an understanding of the processes that account for wealth inequality is still limited. Until recently, efforts to explain wealth inequality typically focused on the role of aggregate influences such as market fluctuations and demographic trends. Evidence suggests that because the wealthy are more likely to own stocks, wealth inequality worsens when the stock market booms. Similarly when real estate values increase, those who own houses and other land improve their position. Because those who are already well-off are more likely to own appreciable land, wealth inequality tends to worsen. With rising land values, however, the middle class has historically benefited more than they do with stock booms because homeownership has been more common among middle class families. Changes in portfolio behavior, that is, in the combination of assets families own, thus have important implications for wealth ownership and inequality. In fact, because stock ownership has become more common among middle class families, stock market booms in the late 1990s had less of an effect on wealth inequality than they would have if middle class stock ownership had remained at previous levels.

Researchers have begun to identify the specific individual and family characteristics that contribute to saving and accumulation, which are factors that affect position in the wealth distribution. Family background contributes to wealth accumulation and mobility in a number of ways. Intergenerational transfers, or inheritance, increase both wealth accumulation and mobility. There is evidence that intergenerational transfers account for anywhere from 20% to 80% of the net worth of current families, although it is likely that most inherited wealth occurs through intervivos (money transferred while parents are living) rather than bequests (which occur after parental death). Divorce or separation directly affects the amount of assets flowing into the family, and indirectly affects children's school performance, educational attainment, and other wealth-related processes (Keister 2005).

Sibship size (i.e., total number of siblings) can also affect adult wealth and chances for upward wealth mobility (Keister 2003). When there are funds to be transferred across generations, children with many siblings generally inherit less compared with children in smaller-sized families. Parents' financial and nonfinancial resources (e.g., time) are also more limited in large families, which negatively affects children's educational quality and attainment. Educational attainment is an important predictor of wealth ownership, as education provides access to stable, high-paying sources of employment and income, which can then provide the monetary basis for investment and future wealth.

Religious upbringing also influences wealth directly though savings or investment behavior as well as indirectly through fertility behaviors or well-being (Keister 2007, 2008). Religion may also provide social contacts that improve opportunities to accumulate wealth via information or investment assistance (Keister 2007). In recent decades, for example, Catholics have been highly upwardly mobile. In contrast, Conservative Protestants have been overrepresented in the bottom of the wealth distribution because they tend to have large families, relatively low education, and low levels of female labor force participation. Moreover, Conservative Protestants tend to share the belief that money belongs to God, and people are tasked with using money to do God's work. Therefore personal wealth accumulation tends to be a low priority for Conservative Protestants.

An individual's environmental and family context also matters for wealth accumulation. Both past and current research has supported the implications of kin networks for individual spending behaviors, savings potential, and, subsequently, the amount of wealth acquired (Stack 1974). Increased incidence of poor kin

causes constraints for wealth accumulation, N. S. Chiteji & Darrick Hamilton (2002) explain, as helping out family takes precedence over saving, and assets that would otherwise go toward increasing the wealth of the primary family unit are given away. Birth cohort, economic trends, and geography can also influence wealth and wealth accumulation through access to resources and employment (Keister 2005). Baby boomers, for example, were more likely to postpone marriage and childbearing than their parents, which explains in part why the boomers have more wealth than their parents at the same age (Keister & Deeb-Sossa 2001).

The type of employment an individual has can affect wealth, as managerial and professional occupations often pay more than skilled- or unskilled-labor positions (McGrath and Keister 2008). Certain occupations may also influence wealth through increased investment resources or opportunity, such as through retirement plans. Education, occupation, or upbringing also can influence how financially literate a person is and, consequently, can facilitate higher rates of wealth accumulation from high-return investments.

Race also has a notable effect on individuals' wealth acquisition. Analysis of wealth distribution in the United States reveals a sizeable disparity between the net worth of Black and Hispanic households as compared to that of White households. Evidence of the Black-White wealth gap in particular has been supported using multiple data sets and numerous indicators over nearly a 20-year period. Analysis of the 1992 and 1994 PSID revealed Black families had less net worth than White families at every income category; even within the $15,000-and-under per year income category, median net worth was $10,000 for Whites and zero for Blacks (Conley 1999, 2001). Analyses of wealth data also suggest that Black-White wealth differences are persistent across age groups, including among the elderly (Ozawa & Tseng 2000). Although nonWhite and Hispanic families have experienced recent growth in both mean and median total wealth, African-American families experienced only an increase in the mean value of net worth, indicating wealth increased mainly for those already at the top of the distribution (Bucks et al. 2006).

The relationship between race and wealth is particularly complicated because race is confounded with other patterns. Disparities in portfolio behavior, housing ownership, and asset composition between Blacks and Whites play important roles (Conley 2001). The vast majority of Black wealth (72.2%) is held in consumable assets while only 25% is in income-producing assets; comparatively, a full 50% of Whites' wealth is in income-producing assets (Oliver & Shapiro 1989). Whites are also four times more likely to own higher-return-producing assets in the form of stock or IRA accounts (Oliver & Shapiro 1989). Blacks' lesser preferences for and access to higher-return investments contributes to this trend (Keister 2000). Home equity represents the largest share of wealth for both Blacks and Whites—62% and 42%, respectively—but median home equity is 1.7 times higher for Whites (Oliver & Shapiro 1989). Homes owned by Blacks experience slower rates of appreciation due to the increased likelihood the home is located in a more urban, less desirable neighborhood (Conley 2001, Flippen 2004). Despite the difference in home quality, Blacks also tend to pay higher mortgages (Conley 2001).

Differential rates and incidences of inheritance have also been cited as important determinants of the Black-White wealth gap; 24% of White households receive bequest inheritances of mean value $115,000 while only 11% of Black households receive inheritances of mean value $32,000 (Wolff 1998, Avery & Rendall 2002). Researchers speculate historically lower rates of marriage for Blacks also result in lower rates of asset transfers (Oliver & Shapiro 1989). A comparison of several wealth-predicting models reveals that socioeconomic differences, parental wealth/inheritance differences, and asset differences all progressively account for some of the disparity between Black and White wealth, although part of the gap continues to be unexplained (Conley 2001).

Research comparing the wealth of immigrants and native-born groups assessed why race has a primary effect on wealth while nativity seems to be secondarily determinative as well as why the lack of intergenerational inheritance tends to effect Blacks' future wealth accumulation but not that of immigrants. Although Native Americans fare better wealth-wise than immigrants, the disparity between these two groups is much smaller than observed wealth differences by race, education, or age (Hao 2007). Comparing the distribution of wealth by nativity status reveals a very similar pattern, although immigrants fare slightly worse in the middle part of the distribution (Hao 2007). A comparison of Black, White, Asian, and Hispanic wealth distributions reveals two distinct patterns: Asians and Whites follow a similar distribution, whereas Blacks and Hispanics follow a different one, which results in universally lower net-worth values. As a single group, Blacks experience the greatest disadvantage in the wealth distribution, particularly above the 70th percentile (Hao 2007).

## FUTURE DIRECTIONS

Researchers must identify levels of wealth inequality and explore changes in inequality for various groups. Current data on wealth ownership are much more reliable than data ever were in the past. Yet there are important

improvements that could be made to data collection and interpretation that would dramatically improve the understanding of wealth inequality and its implications. For instance, better samples, particularly samples that include large and more representative groups of high-wealth households, would allow researchers to better represent the full distribution of wealth. Current wealth samples do not accurately represent the top of the distribution because only a small number of families from that part of the distribution are likely to be included. This poses an issue for accurate data, because the top of the distribution is precisely where the bulk of wealth is held. Naturally, this is an extremely challenging proposition, as the wealthy are more likely than others to be reluctant to participate in a survey. Moreover, very wealthy people may be unaware of the size of their fortunes, particularly if a third party manages their wealth.

However, the Survey of Consumer Finances (SCF) has made an effort to include an over-sample of high-income households in its survey to address this problem. Other surveys might consider imitating this procedure. Moreover, all survey researchers, including those responsible for the collection of the SCF, might consider over-sampling high-*wealth* households rather than high-*income* households given that the correlation between income and wealth is high but very far from perfect.

Future research might also usefully expand on the study of the determinants of saving and accumulation. There are numerous unanswered questions regarding why people save money and why, when they do save, some people experience higher returns than similar others. A related area in which future research could make an important contribution is on how cultural orientation affects wealth ownership. Evidence shows that unique values regarding work and money combined with amenable demographic behaviors (e.g., educational attainment, stable marriage, and high female labor force participation) allowed Roman Catholics to be upwardly mobile in the wealth distribution in recent decades. However, little is known about the practices that lead some religious groups to accumulate relatively high-value wealth portfolios. For example, Mormons tend to be religiously conservative, but there is little evidence that they are asset-poor. Contrasting Mormons with other Conservative Protestants (CP) might provide useful insight into the behaviors and values that affect saving behavior and wealth ownership.

It would also be useful to explore whether some religious groups have closer social networks that compensate for lack of accumulation. Similarly, the growth of suburban megachurches has created a growing group of people who call themselves Conservative Protestants, but who have higher SES than the typical American CP. As these churches continue to grow, they will provide a useful contrast to the group of CP denominations currently being studied (Keister 2007, 2008). Similarly, people born in Jewish families tend to have relatively high net worth, but the processes that account for this are not well understood. Moreover, differences in wealth accumulation among Reform, Conservative, and Orthodox Jews could inform understanding of the relationship between religious values and wealth ownership and help differentiate religious influences from ethnic processes. Researchers also know very little about the effects of other religious beliefs—including Asian religions, Islam, and Eastern Orthodox religions—on wealth.

Finally, prior research has overlooked two other very important questions. First, little exploration of international comparisons of wealth ownership has been done. Data difficulties have made it problematic to compare empirical evidence across national boundaries and, as a result, researchers have very little evidence of transnational trends. The newly-available LWS data (see first section above) may help launch data analysis in this direction. Second, the policy implications of wealth inequality and changing patterns of inequality have attracted relatively little attention. Future research should identify the degree to which wealth inequality is responsive to policy changes and which policy changes affect inequality. Another future challenge for wealth research and policy is to determine how lower-income households or families facing large amounts of debt can successfully begin and maintain the wealth-acquisition process.

**SEE ALSO** Volume 2: *Consumption, Adulthood and Later Life; Debt; Saving;* Volume 3: *Inheritance; Intergenerational Transfers; Pensions.*

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# WIDOWHOOD

One of the most common stressful events in later life is widowhood, which has significant social and psychological implications. Widowhood is the marital status that a man or woman gains once his or her spouse has died. A widow is a woman whose spouse has died, and a widower is a man whose spouse has died. It is useful to distinguish between widowhood and bereavement. Bereavement can be seen as the situation or state of having experienced the death of someone significant in one's life—in this case, a spouse. Bereavement is generally thought to be a short-term state that primarily has personal consequences and meanings. Research into bereavement often examines the events following the death for up to 2 years. Widowhood, by contrast, refers to an ongoing and frequently long-term state, which has both social and personal consequences and meanings. Despite the usefulness of this distinction, much of the research on widowed people does not distinguish between bereavement and widowhood. However, for this entry the term *widowhood* is used.

Widowhood is one of the most deeply distressing life events experienced by adults, and it becomes more likely as people age. In European and North American societies it is also more common among women than men. The fact that men usually die at earlier ages than women and women tend to marry men slightly older than themselves partially explains this phenomenon. In the United States in 2005, 18% of men and 52% of women ages 75 to 84 years were widowed, and 32% of men and 75% of women aged 85 and over were widowed (U.S. Census Bureau, 2006). Similar patterns are observed elsewhere as well. For example, according to the Office for National Statistics (ONS; 2005, 2006) in the United Kingdom, 16% of men and 45% of women 65 years old and over were widowed in 2004. In 2003, 27% of men and 63% of women 75 years old and over were widowed.

## HOW WIDOWED PEOPLE DIFFER FROM OTHER MARITAL STATUS GROUPS

In the United States widowed women account for the largest marital status group among women ages 65 years and over (42%) and is the second largest marital status group for men (32%). In comparison, the divorced and separated (approximately 10% for both men and women) and the never married (4% for both men and women) account for much smaller proportions of the older population (U.S. Census Bureau, 2006) and are broadly similar to those found in the United Kingdom (ONS, 2005, 2006). Widowed, divorced, and never-married people share some of the problems that living alone brings (Cramer, 1993), and widowed and divorced people also share the difficulties that marital dissolution brings (Prigerson, Maciejewski, & Rosenheck, 1999). Widowed and married people also share other commonalities, such as having (in general) a loving marital relationship. However, there are aspects of widowhood that make it and its effects unique. Widowed people are the only group whose partners have died and who have had no choice in the marital dissolution. They are also more likely to be older than other groups experiencing marital dissolution.

## EARLY RESEARCH AND THEORY

Although the vast majority of research on widowhood has been conducted since the mid-20th century, two earlier classic studies of bereavement are worthy of mention

because they have significantly influenced research in widowhood. Sigmund Freud (1856–1939) described the differences between grief and melancholia in his 1917 seminal paper *Mourning and Melancholia*. He understood that the death of a loved one sometimes caused depression and that there was important psychological work to do to ameliorate the effects of grief, coining the term *grief work*.

Erich Lindemann (1944) studied the effects of bereavement following the Coconut Grove fire, a nightclub fire in Boston, Massachusetts, that killed nearly 500 people. He distinguished between normal and morbid grief, and his work formed the basis of much of the later theorizing in bereavement and, to some extent, in widowhood. Normal grief is that which people typically experience following the death of a loved one. Morbid grief, by contrast, is grief that lasts longer and is more severe because of the complications that are associated with it—it is grief that is seen as pathological. However, the systematic study of widowhood is believed to have started with Peter Marris (1958), when he examined normal grief among widowed women in London, England. He found that there was a lower rate of morbid grief among these women than among those who had experienced other types of traumatic bereavement, yet there were also shared experiences, such as sensing the deceased's presence.

Colin Murray Parkes (1996) conducted the first study that followed bereaved people through their first year of bereavement and synthesized the results, along with results of two other important studies, in *Bereavement: Studies of Grief in Adult Life*. In this Parkes identified the determinants of grief, the features of grief, and recommended strategies for helping the bereaved. Although Parkes described his studies in terms of bereavement, he focused primarily on younger widows and thus had much to say about widowhood, both at younger and older ages.

The first author widely recognized for her research specifically on widowhood was Helena Lopata (b. 1925) beginning in the 1970s. She published *Widowhood in an American City* (1973), a study describing the experiences of older widowed women in Chicago, Illinois, which examined both the emotional and the social consequences of losing a husband. Dale Lund (2001) is another widely recognized researcher, who has focused his attention on the effects of spousal loss among men. In Europe, Margaret Stroebe has influenced thinking about both widowhood and bereavement from the 1980s onward, eventually publishing the *Handbook of Bereavement Research* in 2001. At the end of the 20th century, a team of researchers at the University of Michigan developed the Changing Lives of Older Couples (CLOC) study, a large survey that tracked the experiences of older widows and widowers over a 4-year period following the death of their spouse (Carr, House, Wortman, Nesse, & Kessler, 2001).

## THEORETICAL PERSPECTIVES

Most of the theoretical work on widowhood has focused on bereavement rather than on widowhood itself; therefore, this section discusses those aspects of bereavement theory most relevant to widowhood. Historically a number of researchers have developed theories that explain the ways in which people adapt to bereavement, including spousal loss. Many of these have resembled stage theories, which suggest that people must experience sequential emotional states such as anger, depression, numbness, disorganization, and reorganization in order to adapt successfully to loss. In addition, a number of scholars have emphasized the importance of grief work in the adaptation process. Grief work involves working through the feelings, memories, and thoughts associated both with the death itself and with the spouse. However, Lopata (1996) among others have suggested that these approaches are unhelpful and even potentially harmful because they imply that these stages are necessary conditions to successful adaptation.

## THE DUAL PROCESS MODEL OF BEREAVEMENT

In 1999, Stroebe and Henk Schut developed a conceptual model to explain the ways in which people adapt to bereavement, and indeed this model was developed originally with widowhood in mind. The Dual Process Model (DPM) of coping with bereavement describes two types of coping behaviors or experiences: loss-oriented coping and restoration-oriented coping. In the former, coping comprises grief work, as described earlier. This may involve avoiding making changes to one's life—for example, continuing to set the dinner table for two rather than for one. Grief may also intrude into everyday life; seeing someone who resembles the deceased, for instance, may lead to tears. This type of coping may also involve moving to a new home or disposing of the husband's or wife's possessions.

In contrast, restoration-oriented coping consists of attending to life changes, such as changing the names on one's bank account. It also involves doing new things, such as joining a club and taking on new roles or beginning new relationships. Finally it involves avoiding things that remind one of grief; so, for example, people may stay away from the house or keep busy so they have no time to think about how upset they are feeling. Key to the DPM model is oscillation, which is the process whereby coping switches between loss- and restoration-oriented tasks. In 2006 the DPM was brought together with cognitive stress theory (Lazarus & Folkman, 1984) to develop an integrative risk factor

framework (Stroebe, Folkman, Hansson, & Schut, 2006). Cognitive stress theory describes the relationship among stress, coping, and outcome. Central to this theory is appraisal or evaluation of the stressor, in this instance either or both bereavement and widowhood. The aim of the integrative framework is to allow exploration of the ways that individual differences influence adaptation to bereavement and therefore identify those individuals who will deal with bereavement and widowhood normally as well as those who would benefit from some form of intervention.

## CONTINUING BONDS

Another important theoretical perspective is that of continuing bonds with the deceased (Klass, Silverman, & Nickman, 1996). Until work was published on this perspective, the general view was that it was important to sever ties with the deceased as a means of adapting to the new situation. One of the difficulties with the earlier approach was that it did not reflect what most people normally did when dealing with their bereavement and widowhood. Widows normally would keep possessions belonging to their deceased husbands, for example. Both widows and widowers quite normally felt their spouses' presence, in a way that was not associated with pathology or distress. The work of Dennis Klass, Phyllis Silverman, and Steven Nickman (1996) suggested that maintaining a bond with the deceased was common among healthy grieving people. Their book, *Continuing Bonds: New Understandings of Grief*, examined these ideas in detail. In it, for example, Lopata discussed the ways in which older widows idealized their deceased husbands and tended to forget their faults and foibles whereas Miriam and Sidney Moss (1996) discussed the triadic relationship between the widowed person, their new spouse, and their deceased spouse.

Since 2005 other scholars, such as Stroebe and Schut (2005), have begun to discuss whether it is better, in terms of outcome, to relinquish or to continue to hold a bond with the deceased. They suggest that it is not possible to say that one path is more beneficial than another and that it may, instead, depend on the individuals concerned. For some it may be important to maintain bonds, whereas for others it may be necessary to relinquish them. The key may be to distinguish between continuing bonds and grief intensity.

## ANTICIPATION AND SOCIAL CAUSATION

Two other theoretical perspectives are also important to note: anticipatory bereavement and social causation. The theory of anticipatory bereavement suggests that some widowed people experience the effects of bereavement before their spouse has died (Dessonville-Hill, Thompson, & Gallagher, 1988). Among widows who have an ill spouse, this may not be surprising. For example, many spouses die from terminal illnesses such as cancer or from dementia. It is distressing to watch one's spouse die. However, even among those who do not expect their spouses to die, there may be higher levels of depression than those who do not go on to become widowed (Bennett & Morgan, 1992). Thus, it appears that anticipatory bereavement cannot be understood only in terms of caring for a sick spouse. It may also be explained by the fact that, for women in particular, husbands are generally older and are expected to die sooner. The other theoretical perspective is social causation; this perspective suggests that it is the effects of widowed status rather than, or in addition to, the bereavement itself that causes declines in psychological well-being (Wade & Pevalin, 2004). Society does not treat single people, including widowed people, as well or grant them as much status as those who are married. Thus, widowed people are disadvantaged financially, socially, and psychologically.

## THE CONSEQUENCES OF WIDOWHOOD

Traditionally much of widowhood literature has focused on those people for whom experiences of grief and widowhood might be described as pathological. But for the majority of widowed people, especially those who are older, widowhood is a high-probability event and an event that, although distressing, cannot be described as pathological but rather as normative. Among younger people widowhood is less common and not a normative event. In these circumstances, younger people have fewer shared experiences to draw on, and the effects may differ—something that is addressed later in this entry.

However, in general, the evidence suggests that widowed people experience lowered morale and mood following the loss of their spouse. Depressive feelings may be elevated among widowed people for at least 2 years following their loss, and mood may not return to its pre-widowhood levels. However, only a relatively small proportion of widowed people meet the criteria for clinical depression, especially in the long term. Widowed people may miss their spouse and feel sad, but at the same time they carry on with their new lives and find satisfaction. The evidence for physical health is less clear. Some research suggests that there are short-term effects on physical health. For example, sleep and eating habits may be disrupted. Health maintenance behaviors may also be affected; physician consultations, for example, may increase or, conversely, decrease. Changes in these behaviors may be dependent on whether the deceased (often the wife) was the gatekeeper for health-related behaviors. For instance, wives often monitor their husbands' diets and medication

***Cancer Caregiver.*** *Hospice nurse Joni Connelly comforts Nancy Warner as her husband of five days, Dick, lies unconscious in their Post Falls, Idaho, trailer. Marriage was a priority for Dick, who realized his body was beginning to give up its fight against cancer. He was a hospice patient for four and a half months before he died, with Nancy, his wife and caregiver, by his bedside.* AP IMAGES

regimens, and the loss of a spouse may hurt a husband's ability to keep up with these two important health behaviors. There is also evidence, among men in particular, of increased mortality across all causes of death, which includes suicide, but especially in accidental deaths. The popular view of people dying from a broken heart is borne out to some extent by data from death certificates (Parkes, Benjamin, & Fitzgerald, 1969). The evidence suggests that men, rather than women, are more likely to die prematurely following the death of their spouse, and this is across all causes of death (Jones & Goldblatt, 1987).

## SOCIAL CONSEQUENCES

Widowed people also report social consequences of widowhood. Widowed women talk often about changes in friendships. They report losing or being shunned by their married friends and of turning to other widowed women for companionship. The social lives of widowed men also change. Traditionally men's social networks revolved around work. Frequently other social activities, with both family and friends, were arranged by their wives. When their wives die, men must forge new social relationships or face a reduced social circle. The social circle may be increased if the widow(er) remarries. This is more common among men than women. For many women of the pre-World War II (1939–1945) birth cohorts, there is no desire to remarry and resume the traditional gender role of caretaker (Bennett, Hughes, & Smith, 2002).

## GENDER DIFFERENCES

Throughout this discussion there has been evidence of gender differences in the responses to widowhood. Men and women, including the widowed, believe that men fare worse as widowed people than women. They attribute this to men's poorer domestic and social skills and the notion that men, in the European and North American developed nations, bottle up their feelings. Some research suggests that this might be the case, at least with respect to emotional responses. Margaret Stroebe, Robert Hansson, Wolfgang Stroebe, and Henk Schut (2001) found that, on balance, when the most carefully controlled studies were considered, widowed men were more vulnerable following spousal loss, although this difference was small. However, some studies show that the differences may be due not to the experience of emotional stress but rather with the language used in expressing emotional feelings. To preserve masculinity, men may use masculine language such as control and self-sufficiency to express emotional feelings (Bennett, 2007).

## IDENTITY

Identity is one aspect that is challenged by widowhood. For many married people, being married and part of a couple is a central part of their identity. Once a partner has died, society views that person as a widow and as a person alone. Yet the widowed person still sees herself or himself as a wife or a husband and as maintaining a bond with the deceased.

Thus, a widowed person's identity is challenged. At the same time they may see themselves both as a widow(er) and as a wife or husband whose spouse has died. Some changes and reconstructions of identity are required. For men it appears that this is undertaken in ways that allow masculinity to be preserved at a time when it is most under threat. Women, by contrast, maintain their self-identity as wife, while at the same time incorporating an independent and self-sufficient self in the face of social challenges.

## SOCIAL SUPPORT

Social support is known to influence coping in stressful situations in general and, as a consequence, a number of studies have examined the effects of social support on adaptation to widowhood. One of the most carefully controlled studies of social support was conducted with data from the CLOC study. A main effect for social support in simple terms means that the more social support a person has, the better his or her well-being. In addition, if social support has a buffering or mediating effect, then social support will enhance coping with the stressful situation. Stroebe, Zech, Stroebe, and Abakoumkin (2005) found evidence for a main effect for social support but no effects of buffering or social support as a protective factor. They found that social support, though helpful, does not reduce the impact of loss or quicken the pace of adaptation. This may be because bereavement, unlike other types of stressors, is one that (among older adults) is part of the normal aging experience rather than one that is unexpected and abnormal. Social support for widowed people comes from a variety of formal and informal sources. For many, social support is provided informally through family and friends. For some it is provided more formally through welfare and health services or through bereavement counseling. The key to effectively coping with widowhood may be to ensure a good fit between the needs of the widowed person and the support offered. Difficulties may arise when this fit is poor; not only may under-provision be problematic, but over-provision may be inappropriate as well.

The age at which people become widowed may influence the ways in which they respond to widowhood and the ways in which society responds to them. Younger widowed people often face additional challenges. For example, they may have children to care for and, therefore, have to manage their own grief alongside that of their children. There may be greater financial strain as one parent becomes both caregiver to children and breadwinner. Social circumstances also may change; younger widowed people caring for children may feel particularly isolated as they are unable to socialize as often as they wish. Younger widows may be more interested in repartnering than older widows, and yet this may be more difficult if there are children around.

## FACTORS THAT CONTRIBUTE TO OUTCOMES

This discussion has focused on the normal experiences of widowhood. However, there are some factors that contribute to the successful (or unsuccessful) adaptation into widowhood. The circumstance of the death is thought to have some bearing on adaptation. Those people who are widowed as a consequence of violent or traumatic causes may have a poorer outcome, as Lindemann's (1944) early work showed. There is not clear evidence as to whether a sudden or prolonged death is harder to come to terms with (Lopata, 1996). Among older spouses, there may be some recognition that one of them is likely to die and that it is more likely to be the husband. Thus, as has been mentioned earlier, there may be anticipation of the death. The older the spouse, the more likely widowhood becomes. Among younger spouses, by contrast, death is an unlikely event and, thus, may be more difficult to adjust to. For many widowed people, having the opportunity to say goodbye is important but in many cases is simply not possible. Those people who feel responsible, whether with justification or not, for their spouse's death may find adaptation more difficult. Those who had an ambivalent relationship with the deceased may also find adaptation more problematic. Those who keep to themselves, especially in the context of emotional expression, are also less able to cope well.

Some circumstances and personal characteristics appear to be helpful. For example, those who have been caring for a sick spouse may feel some relief mixed with grief. Those who are able to find new meaning and new identities are better able to deal with widowhood. Among men, those who have had previous experience with domestic responsibilities (e.g., looking after children or a sick spouse) appear to be better equipped at adapting to widower status. People who continue to communicate to what they believe is their deceased spouse's presence appear to cope better than those who do not.

Younger widowed men and women may face additional challenges in adapting to widowhood. Many widowed women talk about the changes in friendships that occur as a consequence of widowhood. This is particularly important among younger widows who may face a double burden of isolation. They may have child care responsibilities that tie them to the home and, as with older widowed women, married friends may drift away. American and British society is more accepting and equipped for couples than for those on their own.

## PRACTICE AND INTERVENTION

There have been a number of supports designed for widowed people. Stroebe et al. (2001) make clear the distinction between grief counseling and grief therapy. The former

refers to helping a bereaved person through the process of normal grieving; the latter refers to interventions designed to assist in complicated or pathological grief. In the United States, Phyllis Silverman's (1986) Widow-to-Widow program provides mutual help, whereby widowed people help other widowed people adjust to life as a widow. In the United Kingdom there is a national self-help organization, Cruse, that provides support for widowed people. Lund et al. (2004) has taken the DPM model of coping with bereavement and applied it to an intervention.

## FUTURE OF WIDOWHOOD RESEARCH

The future of widowhood research is very exciting. There are increasing opportunities to study widowhood longitudinally, especially with studies such as the CLOC. It is important to distinguish the effects of widowhood from those of bereavement and from preexisting social and psychological states. Much of the research on widowhood has focused on men and women born before World War II. These men and women grew up with experiences of traditional gender roles, with most men going out to work while women raised the family. These patterns are slowly changing. It is unlikely that the experiences of widowed men and women will be exactly the same when new studies take place with widowed people born after the 1950s. Profound changes also are occurring in the patterns of marital relationships. People are cohabiting more, marrying later, and divorcing and remarrying more frequently. These complex marital histories are likely to make studying widowhood more complex.

**SEE ALSO** Volume 2: *Family and Household Structure, Adulthood;* Volume 3: *Caregiving; Death and Dying; Singlehood.*

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***Kate M. Bennett***

# WISDOM

Wisdom has been hailed as a human virtue across history. Folklore suggests that wisdom increases with age. The scholarly view of wisdom has shifted across time from emphasizing proper conduct in living one's life to focusing on individuals' particular mental capacities and knowledge as well as their socioemotional sensitivity in understanding fundamental life issues. To encompass both moral and social-cognitive aspects of wisdom, Paul B. Baltes and Jacqui Smith (1990) referred to wisdom as an orchestration of mind and virtue. In the past, thorny definitional and measurement issues kept all but the heartiest social science researchers from tackling this complex, value-laden topic. Fortunately, however, the empirical examination of wisdom grew rapidly during the 20th century. The relation of wisdom to aging has been central to its examination in lifespan psychology, life course sociology, and gerontology.

## DEFINITION

In the social sciences, an important distinction is made between implicit and explicit wisdom (Sternberg, 1998). *Implicit wisdom* refers to conceptions of wisdom that individuals with certain personal attributes (e.g., age, gender, culture) carry in their minds. For example, a young woman in Austria may have a different conception (i.e., implicit theory) of what wisdom entails compared with the thoughts of an old man in Japan. Among other issues, research on implicit theories of wisdom addresses whether older and younger individuals conceive of wisdom differently.

*Explicit wisdom* refers to what wisdom *actually is* based on experts' theories (e.g., philosophical writings, theoretical and empirical investigations). Researchers who examine explicit wisdom define and measure individuals' relative levels of wisdom. For example, research addresses whether older individuals have a greater level of wisdom than younger persons. Although definitions of wisdom vary in their specifics, several central aspects appear consistently across the multidimensional definitions of wisdom in the literature. Definitions generally include an integration of positive social-cognitive aspects (e.g., rich knowledge base, reflective attitude), socioemotional qualities (e.g., compassion), and the ability to manifest these capacities in real-world contexts.

One well-accepted definition is that wisdom is expertise in the *fundamental pragmatics of life* (Baltes & Smith, 1990). This involves having rich factual knowledge about human nature and the life course, rich procedural knowledge about ways of dealing with life problems, an understanding of the lifespan contextual nature of issues, a view of different values as relative, and tolerance for uncertainty. This definition does not include age per se; its focus on expertise suggests that age may be a necessary if not sufficient condition for the development of wisdom. Monika Ardelt's definition (2003) of wisdom has also been very influential. She argues that wisdom involves the intersection of three broad components: cognition, reflection, and affect. Ardelt also claims that age alone does not promote wisdom, but her research suggests that wisdom in late life is associated with greater life satisfaction.

Several other authors have contributed key aspects to current definitions of wisdom. For example, R. J. Sternberg's (1998) definition of wisdom from his *Balance Theory* is distinct in including metacognitive style: knowing that one does not know everything. L. Orwoll and M. Perlmutter's (1990) view of wisdom describes it as a mature personality style. Some debate continues in the literature about whether wisdom is best seen as a form of expertise, or behavior, or whether it is an aspect of personality development. J. E. Birren and L. M. Fisher (1990) introduced the notion that regardless of whether wisdom is largely expertise or a matter of personality, it is not simply something one thinks or feels. Wisdom must manifest itself practically in response to life's most challenging issues and problems. These authors also suggest that wisdom should increase with life experience (and therefore age) but note that wisdom is not exclusively found in old age. Baltes and Staudinger (2000) have summarized the relation between age and wisdom by referring to age as one of several *facilitative contexts* for the development of wisdom.

Besides the distinction between implicit and explicit wisdom, scholars have further delineated explicit wisdom. For example, W. L. Randall and G. M. Kenyon (2001) describe *ordinary* and *extraordinary* wisdom. Ordinary wisdom refers to finding meaning in life. This involves accepting and valuing life's experiences including one's own personal life story. Extraordinary wisdom involves cognitive abilities, life experience, relationship skills, striving to live a good life, and spiritual-mystical understanding of the meaning of human existence. A very different delineation has been suggested by Staudinger. She operationalizes the distinction between general and personal wisdom. *General wisdom* is concerned with life

in general (e.g., as described in the Berlin Wisdom Paradigm [Baltes & Smith, 1990), whereas *personal wisdom* refers to wisdom as expressed in relation to one's own life. She suggests that one must first gain general wisdom before moving on to the more difficult task of being wise in relation to one's own personal circumstances.

## CONCEPTUAL DEVELOPMENT AND MEASUREMENT OF WISDOM

Early conceptualizations of wisdom in the social sciences often allied wisdom with aging and viewed it as developing through evaluative recall of one's own life experiences. Lifespan theorist Erik H. Erikson (1902–1994) linked age and wisdom in his eighth stage of ego development, integrity versus despair. Erikson theorized that the final stage of adult development involves looking back over one's life and integrating all that has happened, both positive and negative. This is expected to lead to either a sense of integrity and wisdom, or a feeling of despair that life was not worth living. This focus on reminiscence and integration of one's view of life as a path to wisdom is also present in Robert Butler's (1963) notion of the *life review*. Life review may occur at any juncture in life but is expected to occur in late adulthood as one becomes increasingly aware of mortality. Using reminiscence as a tool to make meaning of one's life as an integrated whole is regarded as an aspect of wisdom. Although these ideas were seldom empirically tested, they remain central to theorist's conceptualizations of wisdom.

As researchers became interested in empirically measuring wisdom, an important conceptual development was the identification of implicit and explicit wisdom as distinct constructs. Research on implicit wisdom assesses what people *think or believe* wisdom is, based on their experience of living in society, learning its language and meanings. The focus of implicit wisdom research has been to document the content of different individuals' implicit theories. A review of the implicit theories literature (Bluck & Glück, 2005) shows that implicit wisdom includes five aspects: cognitive ability, insight, reflective attitude, concern for others, and real-world skills. Implicit theory research has used methods such as having individuals rate a list of personal attributes for their similarity to their concept of wisdom, to assess why certain individuals are viewed as wise, analysis of the types of individuals who are nominated by other people as being wise, assessment of various target individuals for level of wisdom using experimental manipulations (e.g., target is male versus female), and content-coding of autobiographical wisdom experiences. This latter methodology draws on the tradition of collecting reminiscences or autobiographical memory narratives from older adults that reflect instances of intergenerational sharing of life knowledge.

Explicit theory approaches to wisdom assess the level of wisdom that individuals display. Experts' definitions of wisdom are operationalized as criteria used for measuring individuals' level of wisdom. The distinction between implicit (i.e., the views of laypersons) and explicit theories (i.e., the views of expert scholars) persists in the literature and does have utility. Note, however, that explicit and implicit forms of wisdom show considerable overlap in terms of what they consider to be the central aspects of wisdom. Explicit wisdom has been measured through the use of scenarios describing fundamental life issues to which individuals provide open-ended responses (i.e., the Berlin Wisdom Paradigm), and scalar self-assessments (self-report scales on which individuals report their own wisdom level). Some researchers have created composite wisdom scores by combining individuals' performance on several existing measures (e.g., *Openness to Experience, Ego Development*) that together are viewed as approximating wisdom whereas others have attempted to measure wisdom directly.

## MAJOR RESEARCH FINDINGS: IMPLICIT AND EXPLICIT WISDOM

Some major research findings from the social science literature on wisdom are briefly summarized here. Findings from the literature on implicit wisdom are reviewed followed by findings on explicit wisdom.

The common person's view of wisdom (i.e., implicit theory) is important in that it provides him or her with a lens for judging other people's personality or actions as wise or unwise, and also for understanding their own personal development. In a review of empirical literature on implicit theories (Bluck & Glück, 2005), five components of wisdom emerged as central. These were (a) high level of cognitive ability, (b) insight into life and life's problems, (c) reflective attitude, (d) concern or compassion for others, and (e) possession of the real-world skills to manifest the aforementioned qualities in everyday life. Highlights from studies of implicit wisdom are presented to provide a more detailed sense of this literature and its methodology.

One traditional method for assessing individuals' views is to have them generate words they feel are related wisdom, or to rate lists of descriptors of wisdom (generated by the participants or the researcher) in terms of their typicality for wisdom. For example, Birren and Fischer (1990), M. Chandler and S. Holliday (1990), and Sternberg and J. Jordan (1998) have all used methods in which participants generate and/or judge what they see as *typical* characteristics of wisdom. Participants are often laypeople but sometimes include particular groups (e.g., professors in different disciplines, individuals from different cultural

backgrounds or of different ages) so as to examine group differences.

Another method involves asking participants to nominate people they know and consider wise. Nominations can include both personally or publically known people. For example, researchers found that certain religious figures (e.g., Buddha, Jesus, and Mother Teresa [1908–1997]) and socially and politically influential people (e.g., former South African president Nelson Mandela [b. 1918] and American civil rights leader Martin Luther King, Jr. [1929–1968]) were frequently seen as wise (Paulhus, Wehr, Harms, and Strausser, 2002). Nominees were often older than the nominators, were more often men than women (although this may change in the future), and were seen as providing guidance. This fits with the common view that wise individuals can provide good counsel or advice.

An additional approach to studying implicit theories of wisdom is to ask participants to judge experimentally manipulated targets (e.g., texts, videos) for wisdom. For example, to judge male-versus-female or young-versus-old target individuals. Findings have been somewhat inconsistent, but chronological age of the target is sometimes a predictor of higher wisdom ratings. These studies can be limited if they fail to disentangle the role of possible other, subtle, cues including facial and vocal expressions or quality of advice given.

Finally, Susan Bluck and Judith Glück have collaboratively developed the *Wisdom of Experience* method as a way to study individual's views of wisdom, specifically how individuals view wisdom in their own life. This approach is based on life story and reminiscence theory. It relies on gathering autobiographical memory narratives concerning times when people feel they said, thought, or did something wise. Findings show that wisdom narratives involve certain types of life situations (i.e., important life decisions, negative events, management of enduring difficulties). Content coding of autobiographical memories reveal three forms of wisdom the authors categorize as empathy and support, self-determination and assertion, and knowledge and flexibility. The term *empathy and support* refers to seeing others' perspectives and helping them to resolve difficulties. *Self-determination and assertion* refers to taking control and standing by one's own values and priorities. *Knowledge and flexibility* consists of relying on one's experience, compromising, and being tolerant of uncertainty. Adolescents are most likely to show empathy and support, individuals in early midlife are most likely to describe self-determination and assertion, and older adults are most likely to exhibit knowledge and flexibility when asked to describe an instance of wisdom from their own life.

Across studies of implicit theories of wisdom, having high cognitive ability, insight, reflective attitudes, compassion, and the ability to integrate and to show such behaviors in the real world emerge as consistent aspects of individuals' conceptions of what it is to be wise. Of note, however, is the finding that not all individuals hold the same implicit theory. The central aspects of wisdom tend to vary in their relative emphasis in different groups, such as by age, gender, and culture. For example, studies of implicit theories of wisdom provide insight into the common stereotype that older adults are wiser than younger adults. Although some research (e.g., descriptor studies) finds support for this idea, others do not. In particular, older adults themselves are less likely to believe that wisdom comes with age. More common is the notion that wisdom is based on life experiences. M. Takahashi and W. F. Overton (2005) have described cultural differences in what they term as Eastern and Western cultures' Asian, European, and American views of wisdom, and Glück, J. M. Baron, D. P. McAdams, and Bluck (2005) provided evidence from a large-scale survey that men and women within North American and European culture also have slightly different implicit theories of what wisdom entails and how it develops.

The focus turns now to research on explicit wisdom. Those investigating explicit wisdom face the onerous task of developing defensible ways of measuring it. These researchers must defend that they know what wisdom is and that they know how it can be reliably measured. This has led to considerable productive debate. Some suggest that wisdom should be restricted to the humanities (e.g., philosophy, religion) but perseverance by social scientists has resulted in a small but growing body of empirical research on explicit wisdom particularly in the fields of psychology and sociology.

The *Berlin Wisdom Paradigm* (Baltes & Smith, 1990; Baltes & Staudinger, 2000) provided the first systematic method for research on explicit wisdom. Five theory-based criteria are used for assessing wisdom in individuals' responses to hypothetical scenarios about fundamental life problems. Wisdom is defined as expert knowledge about the meaning and conduct of life and one's score across five criteria provides represents one's level of wisdom. Two criteria are central to all types of expertise: rich factual knowledge and rich procedural knowledge. Three others are metacriteria uniquely necessary to wisdom: lifespan contextualism, value relativism, and tolerance for uncertainty. In a typical study, participants think aloud in response to hypothetical problems, such as, "Imagine that someone gets a call from a good friend who says that he or she cannot go on anymore and wants to commit suicide." Trained coders reliably assess participants' open-ended responses using the five wisdom criteria. Baltes and Staudinger (2000) review findings from several cross-sectional studies using this procedure showing that wisdom appears to be stable, but does not increase, across age groups in adulthood.

Monika Ardelt's (2003) conceptualization of wisdom differs in various ways, notably that she more fully embraces the virtue aspect of wisdom (e.g., compassion). She has developed a reliable and valid three-dimensional wisdom scale (3D-WS) that assesses wisdom as a latent construct that encompasses indicators of cognitive, reflective, and affective personality characteristics. A benefit of the scale is its potential for use in large-scale survey research. Ardelt has also found that older adults are not necessarily wiser than their younger counterparts but that wisdom may be a contributor to successful aging in those who do attain it.

Jeffrey D. Webster (2007) has developed a self-assessed wisdom scale (SAWS) for directly assessing wisdom (i.e., not a latent construct as in Ardelt's work). The multidimensional scale assesses experience, openness, emotion regulation, reminiscence, and humor. Individuals scoring high on the SAWS also scored high on related constructs such as generativity and ego integrity but again, no relationship appears simply between wisdom and age. Thus, wisdom has not been directly related to aging.

Some researchers have examined what factors may lead to wisdom across one's life. Longitudinal analyses conducted by P. Wink and M. Dillon (2003) using a composite measure of wisdom have found that wisdom in late life is related to spirituality-religiosity earlier in adulthood. The link between wisdom and spirituality is also implicit in the approach that Michael R. Levenson, Patricia Jennings, Carolyn Aldwin, and Ray Shiraishi (2005) have taken, viewing self-transcendence as a central aspect of wisdom. These researchers also developed the Adult Self-Transcendence Inventory. In one longitudinal study, the development of wisdom in individuals who had experienced trauma was linked to their ability to cope with and find benefit in their difficult experiences. Thus wisdom may arise from difficult life experiences but only when they are coped with effectively and perceived in a certain manner. Identification of the factors that lead to wisdom across adulthood has begun but much is left to understand about wisdom and its development across the lifespan.

## FUTURE DIRECTIONS

In the past, social scientists avoided the study of wisdom as too complex, philosophical, and not approachable through scientific method. Happily, research on wisdom has come of age as evidenced by the publication of a *Handbook of Wisdom* (Sternberg & Jordan, 2005). Where do we go from here? The distinction between implicit and explicit theories has been useful thus far. In future, however, investigation of wisdom might benefit from a blurring of this conceptual boundary. Research might fruitfully begin to focus on the overlap of implicit and explicit wisdom, for example asking questions such as whether individuals who tend to view wisdom a certain way in their own life or in other people (i.e., implicit theories) tend to show greater levels of explicit wisdom in response to life situations.

Another future direction is one that is guided by the past. The wisdom literature has long focused on the notion that wisdom comes with age. Research on both implicit and explicit theories of wisdom, however, has usually found that age itself is not perceived to, nor does it actually, lead to wisdom. Still, it seems imprudent to close the book on the relation of wisdom to age. Studies should continue to investigate the development of wisdom using new methodologies focused on age as but one of several facilitative contexts (educational opportunities and personal childhood background have also been seen as facilitative contexts) for the development of wisdom. Why do some older adults develop wisdom while others do not? Is wisdom in later life a protective factor in dealing with age-related losses? These questions provide fruitful directions for future research.

Finally, understanding the ecology of wisdom is an area for future expansion. That is, a wise person, as Sternberg and Jordan (2005) suggested, adapts to and shapes his or her environment. People develop different views of wisdom within differing cultural and historical environments. Explicit wisdom is manifest as an interaction between the individual and his or her socially shared environment. Thus, investigating the types of environments that promote or discourage wisdom provides a further avenue for productive research. Bluck and Glück's (2005) wisdom of experience procedure seems particularly useful for conducting research from an ecological standpoint. Limited efforts have been made to teach wisdom but some remain skeptical that wisdom can be easily learned. Further understanding the personal characteristics of wise individuals as well as the contexts that elicit wisdom will be crucial to promote wisdom though policy and practice in the future.

**SEE ALSO** Volume 3: *Baltes, Margret and Paul; Lifelong Learning*

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# *Appendices*


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# *Glossary*

**401(k):** a retirement investment plan that allows an employee to put a percentage of earned wages into a tax-deferred investment account selected by the employer.

**Activities of daily living (ADLs) and instrumental activities of daily living (IADL):** ADLs are activities usually performed for oneself in the course of a normal day including bathing, dressing, grooming, eating, using the telephone, taking medications, and other personal care activities. IADLs are more complex daily tasks (light housework, preparing meals, taking medications, shopping for groceries or clothes, using the telephone, and managing money) that enable an older adult to live independently in the community. Inability to perform these tasks is considered in indication of functional limitation or disability.

**Acute pain:** severe physical discomfort that comes on quickly, is generally treatable, and lasts a relatively short time. It is often a response to a specific injury.

**Additivity:** in multivariate statistical analyses, the property of having only main effects and no interaction effects and thus being represented by an additive model without multiplicative terms.

**Adolescence:** the transitional period of physical and psychological development from the onset of puberty to maturity.

**Adoption and Foster Care Analysis and Reporting System (AFCARS):** a program that collects case-level information on all children in foster care for whom State child welfare agencies have responsibility for placement, care or supervision, and on children who are adopted under the auspices of the State's public child welfare agency.

**Adoption and Safe Families Act (ASFA) of 1997:** signed into law by President Clinton on November 19, 1997, AFSA was enacted by Congress in an attempt to correct problems that were inherent in the foster care system that deterred the adoption of children with special needs.

**Adoption Assistance and Child Welfare Act of 1980:** this act was passed by Congress in 1980. Its purposes were: to correct or alleviate problems in the foster care system; to promote permanency rather than multiple foster placement; and to encourage social workers to work toward reunification of the family and to avoid long-term foster care for the children if possible.

**Advance directive:** these documents assert one's medical treatment preferences and the designation of a surrogate decision-maker in the event that a person should become unable to make medical decisions on their own behalf. Advance directives generally fall into three categories: living will, power of attorney and health care proxy.

**Advanced placement (AP) course:** a college-level academic course offered at high schools across the United States and Canada. Demonstrated mastery in a course may exempt a student from taking a similar introductory-level course in college.

**Adversity:** economic, psychological, environmental or social difficulties that may pose challenges for one's life chances and both physical and psychological well-being.

**Affirmative action:** a policy or a program that seeks to redress past discrimination through active measures to ensure equal opportunity, as in education and employment.

**Age Discrimination in Employment Act of 1967:** prohibited discrimination against workers ages 40 to 65, and made it illegal for employers to fire, demote, or reduce the salary of older workers without showing good cause.

**Age-mate:** a peer who shares one's chronological age or who belongs to a shared birth cohort.

**Aid to Families with Dependent Children (AFDC):** formerly named Aid to Dependent Children (1935-1960), AFDC is a federally funded, and usually state or county administered, welfare assistance program that provides supplemental aid to qualifying households that include one or more minor children.

**Allele:** one member of a pair or series of genes that occupy a specific position on a specific chromosome.

**Alzheimer's disease:** the most common form of dementia, a neurologic disease characterized by loss of mental ability severe enough to interfere with normal activities of daily living, lasting at least 6 months, and not present from birth. AD usually occurs in old age, and is marked by a decline in cognitive functions such as remembering, reasoning, and planning.

**American Association of University Women (AAUW):** founded in 1881, this national organization advances equity for women and girls through advocacy, education, and research. It has a nationwide network of 100,000 members, 1,300 branches, and 500 college and university partners.

**American Community Survey:** to begin in 2010, a survey carried out by the U.S. Census Bureau that replaces the long form of the decennial census. It is an ongoing statistical survey, and thus more current than information obtained by the long form.

**American Educational Research Association (AERA):** founded in 1916, this national organization is concerned with improving the educational process by encouraging scholarly inquiry related to education and evaluation and by promoting the dissemination and practical application of research results. Its more than 26,000 members are educators; administrators; directors of research; persons working with testing or evaluation in federal, state and local agencies; counselors; evaluators; graduate students; and behavioral scientists.

**American Federation of Teachers (AFT):** a labor union founded in 1916 to represent the economic, social, and professional interests of classroom teachers. It is an affiliated international union of the AFL-CIO. The AFT has more than 3,000 local affiliates nationwide, 43 state affiliates, and more than 1.4 million members.

**American Psychological Association (APA):** scientific and professional organization representing psychology in the United States. With 148,000 members, APA is the largest association of psychologists worldwide.

**Americans with Disabilities Act (ADA) of 1990:** signed into law in 1990, this wide-ranging civil rights law prohibits discrimination based on disability. It affords similar protections against discrimination to Americans with disabilities as the Civil Rights Act of 1964. Disability is defined as "a physical or mental impairment that substantially limits a major life activity."

**Antenatal:** occurring before birth; prenatal.

**Anthropometry:** the formal measurement of living human individuals for the purposes of understanding human physical variation.

**Antimiscegenation:** practices, historically enforced by law, that banned interracial marriage and sometimes interracial sex between whites and members of other races.

**Antiretroviral:** an agent or process effective against a retrovirus; e.g., a drug to treat HIV.

**Ascriptive:** a status or characteristics determined at birth.

**Asperger's Disorder:** a pervasive developmental disorder, usually of childhood, characterized by impairments in social interactions and repetitive behavior patterns.

**Asphyxia:** impaired or impeded breathing.

**Assortative mating:** long-term romantic pairings, often with the purpose of reproduction, among two persons with similar ethnic, religious, educational, or socioeconomic backgrounds.

**At-risk:** a demographic term to describe a person who is a likely candidate for a given event; e.g., a woman who is past the age of menarche is "at risk" for giving birth.

**Atrophy:** a wasting or decrease in size of a body organ, tissue, or part owing to disease, injury, or lack of use.

**Autonomy:** the capacity to assert control and exercise free will in a given social context.

**Baby boom generation:** the cohort of men and women born during the post-war era. In the United States, this cohort includes persons born between 1946 and 1964.

**Biography:** an account of the life history of an individual.

**Biomarker:** a distinctive biological or biologically derived indicator of a process, event, or condition; e.g., cholesterol level.

**Birth cohort:** a group of individuals born at the same point in history.

**Birth weight:** the weight of an infant at its birth. It is closely related to gestational age and is closely linked to risk of infant mortality.

**Body mass index (BMI):** a statistical measure of the weight of a person scaled according to height. Also called Quetelet index.

**Built environment:** the man-made surroundings that provide the setting for human activity, ranging from the large-scale civic surroundings to personal places.

**Bureau of Labor Statistics:** the principal fact-finding agency for the U.S. government in the broad field of labor economics and statistics. The BLS is an independent national statistical agency, under the Department of Labor, that collects, processes, analyzes, and disseminates essential statistical data to the American public, the U.S. Congress, other Federal agencies, State and local governments, business, and labor representatives.

"**Burnout**": slang term for a person who regularly smokes marijuana.

**Caseload:** the number of clients or cases handled in a given period, as by a clinic or social services agency.

**Casework:** social work devoted to the needs of individual clients or cases.

**Caseworker:** a professional, usually trained in social work, devoted to serving the needs of individual clients or cases.

**Centenarian:** a person who is 100 years old or older.

**Cerebrovascular:** pertaining to the blood vessels and, especially, the arteries that supply the brain.

**Child and Dependent Care Credit (federal tax credit):** a nonrefundable Federal tax credit available to United States taxpayers. Taxpayers who care for a qualifying individual are eligible. The purpose of the credit is to allow the taxpayer (or their spouse, if married) to be gainfully employed.

**Child Care and Development Fund (CCDF):** federal program that provides block grant funding to support early care and education services for nearly two million children in the United States each month. It assists low-income families, families receiving temporary public assistance, and those transitioning from public assistance in obtaining child care so they can work or attend training/education.

**Child rearing:** the act of raising and socializing one's children.

**Childbearing:** the act of giving birth to an infant.

**Childhood Disintegrative Disorder:** a disintegrative psychosis, also known as Heller's syndrome. A rare condition characterized by late onset (>3 years of age) of developmental delays in language, social function, and motor skills. The cause is unknown.

**Chronic Obstructive Pulmonary Disease (COPD):** a disease of the lungs where the airways become narrowed. This leads to a limitation of the flow of air to and from the lungs causing shortness of breath. The limitation of airflow is not fully reversible and usually gradually gets worse over time.

**Chronic pain:** severe physical discomfort that persists or progresses over a long period of time and is often resistant to medical treatments.

**Cloze procedure:** a method for testing a person's ability to comprehend written text by guessing missing words that have been deleted at regular intervals from the text.

**Cohort:** a group of individuals who experience a significant life event at the same point in time, such as birth, school graduation, or marriage.

**Cohort effect:** variation in the characteristics of an area of study (such as political attitudes, or family formation behavior) over time among individuals who are defined by some shared temporal experience or common life experience, such as year of birth.

**Coming out, to come out:** the voluntary public announcement of one's sexual orientation and gender identity.

**Commodification:** process of turning an act, emotion, or idea (e.g., a work of art) into a product that can be bought, sold, and/or mass-produced.

**Communal:** a group of interacting people living in a common location.

**Community-dwelling (as in "community-dwelling older adults"):** persons who are not residing in a hospital, long-term care facility, or nursing home. Those residing in their own homes in the community.

**Comorbidity:** the presence of one or more disorders (or diseases) in addition to a primary disease or disorder.

**Compulsory education:** schooling which children are required by law to receive and governments to provide.

**Conflict theory:** sociological perspective that emphasizes the role of coercion and power, a person's or group's ability to exercise influence and control over others, in producing social order. It states that a society or organization functions so that each individual participant and its groups struggle to maximize their benefits, which inevitably contributes to social change such as changes in politics and revolutions.

**Congenital anomalies:** a physical condition which is present at the time of birth which varies from the standard presentation. Also known as "birth defect."

**Consumer credit counseling:** a process offering education to consumers about how to avoid incurring debts that cannot be repaid. This process typically focuses on debt counseling and may involve negotiating with creditors to establish a debt management plan (DMP) for a consumer.

**Co-payment; co-pay:** a payment made by an individual who has health insurance, usually at the time a service is received, to offset some of the cost of care.

**Coreside, coresiding:** sharing a home with another individual.

**Coresidence:** the process of living in the same household or home as at least one other individual.

**Cost-of-living:** related to the average cost of the basic necessities of life, such as food, shelter, and clothing.

**Course work:** activities and learning carried out by students at university or middle/high school that contributes towards their overall grade, but which is assessed separately from their final exams.

**Cronyism:** partiality to long-standing friends, especially by appointing them to positions of authority, regardless of their qualifications. A practice that is contrary to the principle of meritocracy.

**Curriculum differentiation:** the practice of tailoring teaching environments and practices to create appropriately different learning experiences for different students.

**Defined benefit plan:** a retirement plan that guarantees a worker a certain payout at retirement, according to a fixed formula which usually depends on one's salary and the number of years' membership in the plan.

**Demagogue:** one who uses a political strategy for obtaining and gaining political power by appealing to the popular prejudices, emotions, fears and expectations of the public.

**Dementia:** the progressive decline in cognitive function due to damage or disease in the brain beyond what might be expected from normal aging.

**Democratization:** the transition to a more democratic political regime. May also refer to a transition to more egalitarian distribution of social and economic resources.

**Demographic and Health Surveys (DHS):** nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition. DHS has been conducted in roughly 75 nations.

**Dependent Care Expense Account (DCEA):** a workplace benefits program that workers to set aside part of their pre-tax salary to pay primarily for childcare expenses of dependent children.

**Developmental task:** biological, social, or cognitive transitions that typically occur at a particular life stage, that are considered a pre-requisite for healthy maturation.

**Dichotomy:** division into two mutually exclusive, opposed, or contradictory groups. In statistical analyses, variables such as "male versus female" are considered a dichotomy.

**Disassociation:** a state of acute mental distress in which certain thoughts, emotions, sensations, and/or memories are compartmentalized, diagnosed mostly in individuals with a history of trauma.

**Discouraged workers:** a person of legal employment age who is not actively seeking employment, usually due to giving up looking, or no success looking.

**Disparity:** a stark difference between two social groups; typically used to describe inequitable health and health care access among poor versus wealthy Americans.

**Domestic partnership:** a legal or personal relationship between two individuals who live together and share a common domestic life but are neither joined by a traditional marriage nor a civil union.

**Drop out:** to stop one's formal education prior to the receipt of a degree.

**Duke Longitudinal Studies of Aging:** survey begun in 1956 that monitored the physical, mental, social and economic status of approximately 800 older adults.

**Duration:** the length of time spent in a particular role or social status.

**Earned Income Tax Credit:** a refundable tax credit. For tax year 2007 in the United States, a filer with one qualifying child could receive a maximum credit of $2,853. For two or more qualifying children, the maximum credit was $4,716. Grandparents, aunts, uncles, and siblings can also claim a child as their qualifying child provided they have shared residence with the child for more than half the tax year.

**Ecological systems theories of human development:** theoretical framework, developed by Urie Bronfenbrenner, specifying four types of nested environmental systems, with bi-directional influences within and between the systems. The four systems are: microsystem (immediate environments), mesosystem (connections between immediate environments), exosystem (external environmental settings), and macrosystem (larger cultural context). A fifth system was later added: Chronosystem (the patterning of environmental events and transitions over the life course).

**Ecology:** the scientific study of the distribution and abundance of life and the interactions between organisms and their environment.

**Elementary and Secondary Education Act of 1965:** a United States federal statute which funds primary and secondary education. The funds are authorized for professional development, instructional materials, resources to support educational programs, and parental involvement promotion. The Act has been reauthorized every five years since its enactment; its current reauthorization is the No Child Left Behind Act of 2001.

**Empirical:** a central concept in the social sciences, holding that all evidence must be dependent on evidence or consequences that are observable by the senses. Empirical data is data that is produced by a survey, experiment, observation, or other formal means of data collection.

**Empty nester:** a person whose children have left the family home, and who thus resides either alone or with one's spouse only.

**Enculturation:** the process whereby an established culture teaches an individual by repetition its accepted norms and values, so that the individual can become an accepted member of the society and find his or her suitable role.

**Endogamous:** the process of marrying or mating within one's own social group.

**English as a second language (ESL):** a formal educational program that teaches the English language to non-native English speakers.

**Entropy:** inevitable and steady deterioration of a system or society.

**Epidemiologic paradox:** the documented pattern whereby Latinos have physical health outcomes as good if not better than Whites in the United States, despite their generally poor socioeconomic resources.

**Epidemiology:** the study of social, demographic, and economic factors affecting the health and illness of populations.

**Epigenetic:** changes in gene expression that are stable between cell divisions, and sometimes between generations, but do not involve changes in the underlying DNA sequence of the organism.

**Equity theory:** framework used to explore satisfaction in terms of perceptions of fair/unfair distributions of resources within interpersonal relationships. Persons who perceive that they are under- or over-awarded are believed to experience more distress than those who feel their inputs and outputs are equal.

**Esoteric:** being understood by or meant for only the select few who have special knowledge or interest.

**Ethnocentric:** tendency to look at the world primarily from the perspective of one's own culture. Often involves the belief that one's own race or ethnic group is the most important and/or that some or all aspects of its culture are superior to those of other groups.

**Ethnography:** a research method where data are collected by observing at first hand the behavior and practices of a social group. Participant observation or interviewing strategies are typically used.

**Etiology:** the study of causation, often used to describe the causal factors contributing to disease onset.

**Eugenics:** a social philosophy proposing the possibility of improving the qualities of the human species or a human population, esp. by such means as discouraging reproduction by persons having genetic defects or presumed to have inheritable undesirable traits (negative eugenics) or encouraging reproduction by persons presumed to have inheritable desirable traits (positive eugenics).

**Exacerbate:** to amplify the effect of; often to make the consequences of an event better or worse.

**Executive function:** a set of cognitive abilities that control and regulate one's abilities and behaviors, including goal-directed behavior, initiating or stopping actions, monitoring and changing behavior as needed, and performing novel tasks and situations.

**Externalizing behaviors:** unhealthy or troubled behaviors, typically performed by young people, that involving directing anger and aggression outward (i.e., toward other individuals). Includes attention problems, aggressive behavior, and rule-breaking actions.

**Extracurricular:** activities performed by students that fall outside the realm of the normal curriculum of school or university education.

**Failure to thrive syndrome:** a medical term denoting poor weight gain and physical growth failure over an extended period of time in infancy. Term may encompass poor physical growth of any cause, and does not imply abnormal intellectual, social, or emotional development.

**Fair Labor Standards Act (FLSA) of 1938:** a federal law that established a national minimum wage, guaranteed time and a half for overtime in certain jobs, and prohibited most employment of minors in "oppressive child labor." Also called the Wages and Hours Bill.

**Family and Medical Leave Act of 1993:** a United States labor law allowing an employee to take unpaid leave due to a serious health condition that makes the employee unable to perform his job or to care for a sick family member or to care for a new son or daughter (including by birth, adoption, or foster care).

**Fecundity:** the biological capacity to reproduce.

**First grade:** the first year of formal schooling following kindergarten. In the United States, first grade typically begins at age 6.

**Flextime:** a variable work schedule which allows an employee to select the hours he or she will work, typically a condensed work week. Those working a condensed week may work 4, 10 hour days, rather than 5, 8 hour days. Those who work a 5 day week may work hours other than the typical "9–5."

**Fluency:** ability to express oneself readily and effortlessly both verbally and in writing. Often used to describe

level of proficiency in a language, particularly one other than an individual's native language.

**Foster care:** system by which a certified, stand-in "parent(s)" cares for minor children or young people who have been removed from their birth parents or other custodial adults by state authority.

**Foundation for Child Development:** the oldest private, independent, grantmaking foundation in the nation with a sustained focus on improving the life prospects of children. Dedicated to the principle that all families should have the social and material resources to raise their children to be healthy, educated and productive members of their communities.

**Fragile Families and Child Wellbeing Study:** a survey following a cohort of nearly 5,000 children born in large U.S. cities between 1998 and 2000 (roughly three-quarters of whom were born to unmarried parents).

**Framingham Heart Study:** a cardiovascular study based in Framingham, Massachusetts. The study began in 1948 with 5,209 adult subjects from Framingham, and is now on its third generation of participants. Study findings have informed now-common knowledge concerning heart disease, such as the effects of diet, exercise, and common medications such as aspirin.

**Gender gap:** a disparity between the experiences of men and women; typically used to describe men's earnings advantage, and women's life expectancy advantage.

**Gender-appropriate behavior:** behavior that is consistent with the social norms dictating socially acceptable "male" and "female"-typed behavior.

**Gene-environment interaction:** term used to describe any phenotypic effects that are due to interactions between the environment and genes. Researchers increasingly believe that neither genetics nor environment are solely responsible for producing individual variation, and that virtually all traits show gene-environment interaction.

**Generation:** offspring that are at the same stage of descent from a common ancestor (e.g. mothers and daughters are of different generations). Informally used as a synonym for birth cohort.

**Generation next:** cohort of persons born between 1981 and 1988. Also referred to as Generation Y.

**Generation X:** cohort of persons born between 1966-1980.

**Generativity:** developmental stage, to be attained at midlife, that is believed to be critical for psychological maturation. Coined by Erik Erikson, it refers to the process of nurturing the accomplishments of younger persons, and minimizing attention to personal accomplishments.

**Geriatrics:** branch of internal medicine that focuses on health care of the elderly. It aims to promote health and to prevent and treat diseases and disabilities in older adults.

**Gerontology:** the study of the social, psychological and biological aspects of aging. It is distinguished from geriatrics, which is the branch of medicine that studies the disease of the elderly.

**Globalization:** the development of social and economic relationships stretching worldwide.

**Goals 2000: Educate America Act (1994):** act of the U.S. government that provides resources to states and communities to ensure that all students reach their full potential. States submit applications to develop school improvement plans, and make subgrants to local schools, and awards for preserves and professional development.

**Gun-Free Schools Act:** federal act in the United states stating that any student who brings a weapon to school must be expelled for a period of no less than one year.

**Heterogeneous:** consisting of diverse components or subgroups.

**Heterogeneity:** diversity in a subgroup.

**Homogamous:** a romantic pairing or marriage between two persons sharing social traits such as race, ethnicity, or educational attainment.

**Homophily:** the tendency of individuals to associate and bond with similar others.

**Hospice care:** a philosophy of care that recognizes death as the final stage of life and seeks to enable patients to continue an alert, pain-free life and to manage other symptoms so that their last days may be spent with dignity and quality, surrounded by their loved ones.

**Human capital:** the set of skills which an employee acquires on the job, through training and experience, or through formal education, which increase that employee's value in the marketplace.

**Identity:** an individual's conceptualization of one's self as a discrete, separate entity. The content of one's identity is shaped by one's interactions with significant others, social context, and group memberships.

**Improving America's Schools Act of 1994:** a federal act targeted at reforming education. It included provisions or reforms for: the Title 1 program, providing extra help to disadvantaged students, holding schools accountable for their results at the same level as other students, charter schools, safe and drug-free schools, technology, and increases in funding for bilingual and immigration education.

***In loco parentis*:** latin phrase for "in the place of a parent." Refers to the legal responsibility of a person or organization

to take on some of the functions and responsibilities of a parent. For example, colleges and schools may act in the best interests of the students as they see fit, in the absence of parental intervention.

**Incidence rates:** the rate at which new events occur in a population. The numerator is the number of new events occurring in a defined period; the denominator is the population at risk of experiencing the event during this period. Typically used to summarize the onset of disease in a population.

**Individualism:** a moral, political, or social outlook that stresses independence, self-reliance and individual liberty.

**Individuals with Disabilities Education Act (IDEA) of 2004:** a federal law ensuring services to children with disabilities throughout the nation. IDEA governs how states and public agencies provide early intervention, special education and related services to more than 6.5 million eligible infants, toddlers, children and youth with disabilities.

**Industrial Revolution:** the transformation of the U.S. economy in the late 19th century to one reliant on agriculture and home production, to one reliant on manufacturing and mass production of goods.

**Inflation:** the overall general upward price movement of goods and services in an economy, usually as measured by the Consumer Price Index and the Producer Price Index in the United States.

**In-group:** the social group to which one belongs, and which one views as superior to other social groups.

**Innate:** a personal characteristic that is present since birth. Also considered an essential and important trait of an individual.

**Institutional racism:** a form of racism (i.e., discrimination on the grounds of race) which occurs specifically in institutions such as corporations, school systems, financial organizations, and universities.

**Internalizing behaviors:** behavior problems that manifest by turning inward and potentially harming one's self.

**Jim Crow laws:** state and local laws enacted primarily in the Southern United States between 1876 and 1965. They mandated *de jure* segregation in all public facilities, with "separate but equal" accommodations for black Americans and members of other non-white racial groups. In practice, this led to treatment and accommodations that were inferior to those provided for white Americans, systematizing a number of economic, educational and social disadvantages.

**K–12:** referring to the U.S. school grades of kindergarten through grade 12, the final year in the formal secondary school system.

**Life chances:** the opportunities each individual has to improve their quality of life. The concept was introduced by German sociologist Max Weber. It is a probabilistic concept, describing how likely it is, given certain factors, that an individual's life will turn out a certain way.

**Life cycle:** a progression through a series of differing stages of development. A term used by developmental psychologists, whereas sociologists use the related phrase "life course."

**Life span:** the typical length of time that any particular organism can be expected to live.

**Life table:** a numerical table which shows, for a person at each age, what the probability is that they die before their next birthday. These data are used to calculate life expectancy, or the average number of years an individual can expect to live in the future.

**Lifelong:** referring to characteristics or experiences that last over the entire life course.

**Limited English proficient (LEP):** students who perform in the bottom one-half to one-quarter on standardized tests that measure knowledge of the English language. Through the Bilingual Education Act of 1968, these students are often provided with instruction in the public schools that supplements or replaces regular classroom instruction.

**Linked lives concept:** a key principle of the life course paradigm. It holds that human lives both shape and are shaped by one's relationships with other individuals, particularly family members.

**Longitudinal studies:** mode of data collection that involves repeated observations of the same items or individuals over long periods of time–often many decades.

**Long-term-care facility:** a residential facility, typically inhabited by older persons or persons with chronic illness or disability who cannot care for themselves for long periods of time. Provides residents with services to meet their medical and non-medical needs.

**Luxembourg Income Study (LIS):** a cross-national database of micro-economic income data from 30 countries on 4 continents.

**Male climacteric:** also known as andropause or "male menopause." Stage experienced by midlife men, marked by relatively low levels of testosterone, loss of libido and potency, nervousness, depression, impaired memory, the inability to concentrate, fatigue, insomnia, hot flushes, and sweating. Empirical evidence in support of this concept is weak and controversial.

**Mandatory retirement:** based on their age, older persons who hold certain jobs may be required by statute to step down, or retire. The practice is justified by the argument that certain occupations are either too dangerous (military

personnel) or require high levels of physical and mental skill (airline pilots). Many view the practice as a form of age discrimination.

**Marriage market:** the pool of eligible candidates that an individual may plausibly consider for marriage. Marriage markets typically are defined by geographic proximity, age, gender, education, and race/ethnicity. Marriage rates are low when one faces a small or inappropriate marriage market.

**Means-testing:** an investigative process which determines whether an individual or family is eligible to receive certain types of government benefits, such as welfare or Medicaid. The "test" can consist of quantifying the party's income, or assets, or a combination of both.

**Mediating variables:** a variable, or measure used in statistical analyses, that partially accounts for the causal relation between the purported independent and dependent variable. For example, the effect of parental poverty on one's own adult health is mediated by, or partially explained by, one's own educational attainment.

**Medicalization:** the process by which health or behavior conditions come to be defined and treated as medical issues. For example, the widespread availability of antidepressants contributes to the medicalization of depression; where it is considered a medical disorder to be treated, rather than a normal response to stressful social circumstances.

**Meta-analysis:** a statistical technique for amalgamating, summarizing, and reviewing previous quantitative research. Researchers amass many published studies on a single topic, such as, the effect of gender on depressive symptoms, and then develop a statistical summary of the results obtained from all studies, and ultimately draw a conclusion about general pattern.

**Middle-aged:** describes persons who have completed young adulthood, but have not yet reached old age. Generally believed to be ages 40 to 60.

**Middle-income:** those individuals or households whose income is generally in the middle of the overall national income distribution.

**Midlife:** life stage including persons who have completed young adulthood, but have not yet reached old age. Generally believed to be ages 40 to 60.

**Moderating variable:** a variable, or measure used in statistical analysis, that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable. For example, the effect of education on earnings may be moderated by gender; each additional year of education may bring higher income for men versus women.

**Modernization:** the process through which a nation or region becomes "modern," and thus guided by science rather than religion; manufacturing and service economies are more common than agricultural; and attitudes and values reflect individualism rather than collectivities.

**Mortality rate:** a measure of the number of deaths (either all causes, or due to a specific cause) in some population, scaled to the size of that population, per unit time. For example, the annual mortality rate in the United States was approximately 826 deaths per 100,000 persons in 2007.

**Narcissism:** a personal trait involving excessive self-regard and self-focus.

**National Assessment of Educational Progress (NAEP):** known as "the Nation's Report Card," it is the only nationally representative and continuing assessment of what students in the U.S. know and can do in various subject areas. Since 1969, assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and the arts.

**National Center for Early Development and Learning (NCEDL):** a national early childhood research project supported by the U.S. Department of Education, NCEDL focuses on enhancing the cognitive, social, and emotional development of children from birth through age eight.

**National Center for Education Statistics (NCES):** a division of the U.S. Department of Education and the Institute of Education Sciences, NCES is the primary federal entity for collecting and analyzing data related to education.

**National Center for Health Statistics:** a part of the U.S. Centers for Disease Control and Prevention (CDC), NCHS is the United States' principal health statistics agency. It designs, develops, and maintains a number of systems that produce data related to demographic and health concerns. These include data on registered births and deaths, and national surveys of health.

**National Coalition Against Domestic Violence (NCADV):** a grassroots non-profit membership organization working since 1978 to end violence in the lives of women and children. Provides a national network for state coalitions and local programs serving battered women and their children, public policy at the national level, technical assistance, community awareness campaigns, general information and referrals, and publications on the issue of domestic violence.

**National Council on Measurement in Education (NCME):** a professional organization for individuals involved in assessment, evaluation, testing, and other aspects of educational measurement. Members are involved in the construction and use of standardized tests; new forms of assessment, including performance-based assessment; program design; and program evaluation.

**National Education Association (NEA):** the largest labor union in the United States, representing public school teachers and other support personnel, faculty and staffers at colleges and universities, retired educators, and college students preparing to become teachers.

**National Heart, Lung, and Blood Institute (NHLBI):** a division of the National Institutes of Health (NIH), NHLBI supports research that advances understanding of the diagnosis, progression, treatment, and prevention of diseases of the heart, blood vessels, lung, and blood; blood resources; and sleep disorders.

**National Household Education Survey (NHES):** national survey designed to collect information from households on a variety of educational issues, including early childhood education, school readiness, school safety and discipline, early childhood program participation, parental involvement in education, and children's civic engagement. Conducted by the National Center for Education Statistics (NCES), the NHES obtains data from parents and children.

**National Institute of Mental Health (NIMH):** a division of the National Institutes of Health (NIH), NIMH aims to reduce the burden of mental illness and behavioral disorders through research on mind, brain, and behavior.

**National Institute on Aging (NIA):** a division of the National Institutes of Health (NIH), NIA leads a broad scientific effort to understand the nature of aging and to extend the healthy, active years of life.

**Nativism:** practice or policy of favoring native-born citizens over immigrants.

**Neophyte:** a beginner; novice.

**Nepotism:** the showing of favoritism toward relatives and friends, based upon that relationship, rather than on an objective evaluation of ability, meritocracy or suitability. Often considered a factor contributing to cumulative advantage among already advantaged social groups.

**No Child Left Behind Act of 2001:** a controversial United States federal law that is intended to improve the performance of U.S. primary and secondary schools by increasing the standards of accountability for states, school districts, and schools, as well as providing parents more flexibility in choosing which schools their children will attend. The law requires all states to develop content standards and to measure progress of students through annual testing in English/Language Arts, Mathematics, and Science in grades 3 through 8, and once in high school.

**No-fault divorce:** the dissolution of a marriage requiring neither a showing wrong-doing of either party. It is granted upon a petition by either party to a family court, without requiring the petitioner show that the respondent is at fault, and despite respondent's potential objections to the dissolution.

**Nonmarital:** the state of being unmarried. Often used to describe childbearing that occurs among unmarried persons (e.g., nonmarital childbearing).

**Nonminority:** a member of a majority social group. In the United States, nonminority typically refers to non-Hispanic whites, while minority refers to Blacks, Asians, Hispanics, and Native Americans.

**Norms:** widely accepted, socially constructed expectations for human behavior. Adherence to these expectations is enforced through formal and informal social sanctions (i.e., rewards and punishments). Norms often are specific to specific social groups; that is, specific expectations guide the appropriate behavior for individuals based on their age, gender, social class, etc.

**Numeracy:** an ability to understand and work with numbers and other mathematical concepts. Also called numerical literacy.

**Offending:** violating a rule or law.

**Off-site:** taking place or occurring not on site (e.g., employees of a corporation who work in their own homes are working off-site).

**Off-time:** a behavior or transition that occurs at an age that departs from normative time tables. Usually refers to transitions that occur early, and thus for which one is ill-prepared (e.g., giving birth at age 16 among modern American teens).

**Old-age:** pertaining to later stages of the life course, esp. age 65 and older.

**One-drop rule:** a historical colloquial term in the United States that holds that a person with any trace (i.e., "one drop" of blood) of African ancestry cannot be considered White. Unless the person has an alternative non-White ancestry that he or she can claim, such as Native American, Asian, Arab, Australian aboriginal, the person must be considered Black.

**On-site:** taking place or occurring on site (e.g., employees of a particular firm who work at the corporate offices are working on-site).

**On-the-job:** activities the occur when one is holding a job or working at a work site; e.g., on-the-job training involves the pursuit of job skills in one's current employment setting.

**Ontological:** pertaining to the study of being or existence and its basic categories and relationships.

**Operationalization:** the process of defining an abstract or vague concept so as to make the concept measurable in form of (variables) consisting of specific observations.

For example, "social status" often is measured as number of years of education completed, or current household income.

**Organization for Economic Co-operation and Development (OECD):** formed in 1948, an international organization of thirty countries that accept the principles of representative democracy and free market economy. Initially formed to administer the Marshall Plan, for the reconstruction of Europe after World War II.

**Out-group:** social groups that one is not a part of, and thus are devalued; opposite of in-group.

**Out-of-wedlock:** occurring outside of marriage; e.g., births that occur to unmarried persons.

**Pandemic:** an epidemic of infectious disease that spreads through human populations across a large region, such a continent, or even worldwide; e.g., bubonic plague.

**Paradigm:** the set of practices and guiding philosophies that define a scientific discipline during a particular period of time.

**Parity:** the number of liveborn children a woman has delivered.

**Parochial:** of or relating to a church parish. Often used to describe Catholic or "parochial" school.

**Partograph:** a tool that can be used by midwifery personnel to assess the progress of labor and to identify when intervention is necessary.

**Part-time:** describing work hours that are less than full time; usually fewer than 35 hours per week.

**Pathology:** the study and diagnosis of disease through examination of organs, tissues, bodily fluids and whole bodies. May also refer to departure or deviation from a normal condition; e.g., high levels of crime are considered an indication of neighborhood pathology.

**Perinatal:** pertaining to the period immediately before and after birth. Exact time points vary, yet typically ranges from the 20th to 28th week of gestation and ends 1 to 4 weeks after birth.

**Perpetuate:** cause to continue; e.g., economic strains following divorce can perpetuate symptoms of divorce-related distress.

**Personal Responsibility and Work Opportunity Reconciliation Act of 1996:** also referred to as "welfare reform," this controversial Federal act gives states the power to reform their own programs to move people from welfare to work. A key part of PRWORA is the change of federal Aid to Families with Dependent Children (AFDC) funding from matching funding to the Temporary Assistant to Needy Families (TANF) block grant.

**Pervasive Developmental Disorder:** five developmental disorders characterized by delays in the development of multiple basic functions including socialization and communication. The most commonly known PDD is (1) Autism, with the remaining identified as (2) Rett syndrome, (3) Childhood disintegrative disorder, (4) Asperger syndrome, and (5) Pervasive Developmental Disorder Not Otherwise Specified (or PDD-NOS).

**Pharmacotherapy:** treatment of disease through the use of drugs.

**Phonology:** subfield of linguistics which studies the sound system of a specific language or set of languages.

**Planful competence:** cluster of personal characteristics associated with positive social and emotional development over the life course, according to sociologist John Clausen. Its three components are: self-confidence, dependability, and intellectual investment.

**Policymaker:** a person with power to influence or determine policies and practices at an international, national, regional, or local level.

**Polygyny:** a mating practice in which a male has more than one female sexual partner.

**Population Association of America (PAA):** an organization of professionals working in the population field, including demographers, sociologists, economists and public health professionals.

**Postdivorce:** experiences that occur after one formally dissolves a marriage.

**Postindustrial economy:** a period of growth within an industrialized economy or nation in which the relative importance of manufacturing lessens and that of services, information, and research grows.

**Postneonatal:** refers to time period from the end of the first month of an infant's life to a year after birth.

**Postretirement:** experiences that occur after one formally exits the paid labor force.

**Post-traumatic stress disorder (PTSD):** an anxiety disorder that can develop after exposure to one or more terrifying events in which grave physical harm occurred or was threatened. A severe and ongoing emotional reaction to an extreme psychological trauma.

**Poverty line:** the minimum level of income deemed necessary to achieve an adequate standard of living in a given country. In the United States, the level takes into consideration age, household size, and the cost of expenses such as food.

**Preadolescence:** the period prior to adolescence, typically prior to age 12.

**Predispose:** to make one susceptible to some outcome; for example, obesity predisposes one to diabetes risk.

**Preindustrial:** the historical period before industrialization, specif. before the Industrial Revolution.

**Pre-K:** experiences, particularly schooling, that takes place prior to kindergarten.

**Preschool-age:** the period prior to starting kindergarten, typically prior to age 5.

**Prevalence rate:** the proportion of people in a population who have a disease at a given time: the numerator is the number of existing cases of disease at a specified time and the denominator is the total population.

**Primary stressor:** the root origin of a series of other problematic life circumstances, called secondary stressors; e.g., the primary stressor of job loss may trigger the secondary stressor of financial strains.

**Programme for International Student Assessment (PISA):** begun in 2000, a system of international assessments that focus on 15-year-olds' capabilities in reading literacy, mathematics literacy, and science literacy. PISA is organized by the Organization for Economic Cooperation and Development (OECD).

**Proliferation:** a rapid and often excessive spread or increase, often used to describe stress; e.g., poverty leads to the proliferation of related stressors such as poor nutrition, medical care, and neighborhood quality.

**Prosocial:** circumstances when someone acts to help another person, particularly when they have no goal other than to help a fellow human.

**Proximal, distal influences:** refers to potentially causal influences; proximal are immediate or direct effects, while distal influences are more far removed; e.g., poverty is a distal influence on obesity; poor nutrition is a proximal influence.

**Proxy:** a person authorized to act on another's behalf; e.g., persons who are in a coma may have their health care wishes conveyed by a proxy.

**Psychometric:** the theory and technique of educational and psychological measurement, which includes the measurement of knowledge, abilities, attitudes, and personality traits.

**Psychosocial stressor:** a distressing event or experience which compromises one's psychological or social well-being.

**Public Schools Accountability Act of 1999 (California act):** law enacted in California that authorizes the creation of an educational accountability system for California public schools. Its primary goal is to help schools improve and to measure the academic achievement of all students.

**Qualitative:** research method that focuses on processes, and obtaining the point of view of research subjects. Typically small, focused samples rather than large random sample. Four common methods include: (1) participation in the setting, (2) direct observation, (3) in depth interviews, and (4) analysis of documents and materials.

**Quasi-experimental:** research method that shares characteristics of true experiments, yet lacks the random assignment. Often involves "natural experiments" such as comparing human behavior both pre- and post- an historical event; e.g., comparing depressive symptoms reported in surveys conducted in the first 9 months of 2001, versus those reported after September 11, 2001.

**Recidivism:** the act of a person repeating an undesirable behavior after they have either experienced negative consequences of that behavior, or have been treated or trained to extinguish that behavior. Often used to describe the process of returning to prison after one has been released.

**Reciprocity:** the act or strong strong social expectation that people will respond to each other in similar ways — responding to gifts and kindnesses from others with similar benevolence of their own, and responding to harmful, hurtful acts from others with either indifference or some form of retaliation. Often used when studying caregiving and intergenerational transfers.

**Reflexivity:** process of exploring the ways in which a researcher's involvement with a particular study influences, acts upon and informs such research.

**Religiosity:** a comprehensive term describing the numerous aspects of religious activity, dedication, and belief.

**Repudiation:** act of rejecting or disowning or disclaiming as invalid; e.g., research purporting to show racial differences in innate intelligence has been repudiated on methodological and ethical grounds.

**Resilience:** the positive capacity of people to cope with stress and catastrophe. May describe persons bouncing back to high levels of psychological well-being after experiencing a major stressor and a spell of psychological distress.

**Retirement-age:** referring to persons age 65 and above.

**Rett's Disorder:** a neurodevelopmental disorder that is classified as a pervasive developmental disorder by the DSM-IV. Characteristics include deceleration of the rate of head growth; small hands and feet; repetitive hand movements; cognitive impairment; and problems with socialization.

**Sample survey:** research method used to collect quantitative information about characteristics of a subsample of a population.

**School-age:** referring to children ages 6 to 17, or ages at which young people in the United States traditionally are enrolled in school.

**School-to-work:** describing the transition from full-time education to full-time employment.

**Secondary stressor:** a stressful event or condition that results from a primary, or preceding, stressor; e.g., the primary stressor of divorce may lead to a secondary strain of moving to a new neighborhood.

**Secularization:** the process of transformation by which a society migrates from close identification with religious institutions to a more separated relationship.

**Selective attrition:** the tendency of some people to be more likely to drop out of a study than others. Those who drop out of (or "attrite from") share characteristics that make them distinct from those who remain in the sample. Thus, observed differences between sample means of the wave 1 and wave 2 sample may reflect the fact that the two populations are fundamentally different, due to characteristics of those who attrite versus remain in the study.

**Self-actualization:** developing or achieving one's full potential. Considered the pinnacle of psychologist Abraham Maslow's hierarchy of needs.

**Senescence:** the biological processes of a living organism approaching an advanced age. Often used to describe physical declines among older adults.

**Senile dementia:** the mental deterioration (loss of intellectual ability) that is associated with old age. Two major types of senile dementia are identified: those due to generalized atrophy (Alzheimer type) and those due to vascular problems (mainly strokes).

**Service sector:** the part of industry or business which deals with the marketing and selling of intangible products rather than physical goods.

**Smith-Hughes Act of 1917:** act of the United States Congress that promoted vocational agriculture to train people "who have entered upon or who are preparing to enter upon the work of the farm," and provided federal funds for this purpose.

**Social exclusion:** the alienation or disenfranchisement of certain people within a society, often due to one's social class, educational status, relationships in childhood, and living standards. Exclusion may limit one's opportunities to succeed.

**Social learning:** a theory that explains how people learn social behavior, through observation. If people observe positive, desired outcomes in another's behavior, they are more likely to model, imitate, and adopt the behavior themselves.

**Social norms:** widely-agreed upon expectations for appropriate social behavior. Violation of expectations may be socially sanctions. Expectations are often specific to one's age, gender, or birth cohort.

**Social safety net:** term used to describe a collection of services provided by the state, such as welfare, unemployment benefits, universal healthcare, homeless shelters, the minimum wage and sometimes subsidized services such as public transport, which prevent individuals from falling into poverty beyond a certain level.

**Social Security Act of 1935:** the federal retirement plan enacted by U.S. Congress in 1935. The original purpose (unchanged today) of the Act was to adopt a system that required the current working generation to contribute to the support of older, retired workers. The Act was passed in response to old-age dependency resulting from Depression-generated phenomena.

**Socialization:** the process of learning to become a member of one's society.

**Socioeconomic status (SES):** indication of an individual's or family's economic and social position relative to others, usually based on income, education, occupation, or some combination thereof.

**Soft drug use vs. hard drug use (or soft drugs vs. hard drugs):** categories of non-prescription psychoactive drugs. Hard drug generally refers to drugs illegal for nonmedical use that lead to profound and severe addiction, as opposed to soft drugs that has weaker or no physical withdrawal symptoms.

**Stigma:** the phenomenon whereby an individual with an attribute, which is deeply discredited by his/her society, is rejected as a result of the attribute. Common stigmas in the United States are obesity, mental illness, and substance use.

**Stonewall Rebellion:** series of violent conflicts between lesbian, gay, bisexual, and transgendered individuals and New York City police officers that began during a June 28, 1969 police raid, and lasted several days. Conflicts were centered at the Stonewall Inn and are widely recognized as the catalyst for the modern-day movement towards gay rights.

**Stratification:** the hierarchical arrangement of social groups within a society. Typically used to describe differences on the basis of one's social class, caste, or and strata within a society.

**Stressor:** an agent, condition, or other stimulus that causes stress to an organism.

**Sub-Saharan:** geographical term used to describe the area of the African continent which lies south of the Sahara, or those African countries which are fully or partially located south of the Sahara.

**Subsidize:** to aid or promote with public money, such as housing or job programs that are partially funded with public funds.

**Sudden infant death syndrome (SIDS):** a syndrome marked by the symptoms of sudden and unexplained death of an apparently healthy infant aged one month to one year.

**Sun Belt:** region of the United States generally considered to stretch across the South and Southwest (the geographic southern United States). The Sun Belt has seen substantial population growth in recent decades, partly fueled by a surge in retiring baby boomers who migrate domestically. Includes the states of Alabama, Arizona, California, Florida, Georgia, Louisiana, Mississippi, Nevada, New Mexico, South Carolina, and Texas.

**Supplemental Security Income (SSI):** a monthly stipend provided to aged (legally deemed to be 65 or older), blind, or disabled persons based on need, paid by the United States government.

**Survey of Income and Program Participation (SIPP):** a statistical survey conducted by the United States Census Bureau. The main objective of the SIPP is to provide accurate and comprehensive information about the income of American individuals and households and the participation of these people in income transfer programs. Designed as a continuous series of panels, with a sample size from approximately 14,000 to 37,000 households. Each panel lasts from 2.5 to 4 years. The SIPP sample is a multistage-stratified sample of the U.S. civilian noninstitutionalized population. The respondents are all household members 15 years or older.

**Taxonomy:** the practice and science of classification.

**Temporary Assistance to Needy Families (TANF):** U.S. federal assistance program, commonly known as "welfare." It began on July 1, 1997, and succeeded the Aid to Families with Dependent Children program, providing cash assistance to indigent American families with dependent children. Before 1996, eligibility was determined simply by entitlement. Now, states are given grants to run their own programs. TANF was created by the Personal Responsibility and Work Opportunity Act, which provides a maximum of 60 months of benefits within one's lifetime.

**Total fertility rate (TFR):** the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility rates (ASFRs) through her lifetime, and she were to survive from birth through the end of her reproductive life. It is obtained by summing the single-year age-specific rates at a given time.

**Trajectory:** a path of action. In life course sociology, trajectories are joined by transitions. For example, progressing through school grades is an educational trajectory, while entering the work force and receiving promotions is considered a career trajectory.

**Transitions:** the point of movement from one role or status to another. For example, the school-to work transition involves the movement from the role of student to worker; the transition to parenthood involves movement from the status of childless person to parent.

**Turning points:** the real or perceived movement from one role or status to another. A turning point may be based on observable roles or behaviors, such as the graduating high school, or may be internal and perceived, such as believing that one is an adult, rather than a child.

**Typology:** the systematic classification of types or subgroups; such as a typology of personality groups.

**United Nations Children's Fund (UNICEF):** United Nations Children's Fund or UNICEF is an international organization that provides many types of assistance and help to children and mothers throughout the world. It is funded by governments and private donations.

**United Nations Development Programme:** the United Nations' global development network. Headquartered in New York City, the organization has country offices in 166 countries, where it works with local governments to meet development challenges and develop local capacity. UNDP provides expert advice, training, and grant support to developing countries, with increasing emphasis on assistance to the least developed countries.

**Unretirement:** the process of returning to full-time or part-time work after one has exited the labor force due to retirement.

**Upward mobility:** a change and increase in one's social standing, typically described in terms of education, income, or occupational status. Typically refers to intergenerational mobility, or the movement from one's parent's social class to one's own achieved social class in adulthood.

**Variance:** one measure of statistical dispersion, averaging the squared distance of its possible values from the expected value (mean). Whereas the mean is a way to describe the location of a distribution of a measure, the variance is a way to capture its scale or degree of being spread out.

**Venereal diseases:** an illness that has a significant probability of transmission between humans or animals by means of sexual contact, including vaginal intercourse, oral sex, and anal sex.

**Video deficit:** a psychological phenomenon exhibited among toddlers. Toddlers are less successful at repeating tasks they

watch on a video screen compared to the same tasks observed in real life. This video deficit reinforces the importance of human interaction in the development of young children.

**Welfare:** government programs which seek to provide a minimum level of income, service or other support for disadvantaged peoples.

**Well-being:** the physical, emotional, social, and psychological quality of life enjoyed by an individual.

**Workforce:** all persons in a population who is available to work and of working age.

**Working-age:** the population group most likely to be economically productive in a society. It is defined as the population group ages 15 to 64.

**Working-class:** social class grouping that typically includes reference to education, occupation, culture, and income. It is commonly used to refer to a group of people who are employed for wages, especially as manual workers.

**Workplace:** a place, such as an office or factory, where people are employed.

**Workweek:** the legal workweek varies from nation to nation. It is the consecutive set of days, not including the weekend, in which most paid work activities occur. In the United States the workweek lasts 5 days, Monday through Friday.

**World Fertility Surveys (WFS):** survey of human fertility initiated in 1972 and completed in 1984. The WFS provided information for 42 developing countries and 20 developed countries. As part of the survey nearly 350,000 women between the ages of 15 and 49 were interviewed. The WFS objectives were to help developing countries assess fertility levels, to collect data comparable between countries, and to promote national competence in survey methodology. The WFS was followed by the Demographic and Health Surveys.

**World Health Organization (WHO):** a part of the United Nations system, the WHO provides leadership on global health matters by setting the global health research agenda, including norms and standards. The WHO influences the health policy of nations around the world. The WHO also provides technical support to countries and monitoring and assessing health trends.

**World Wide Web; the web:** a system of Internet servers that contain and support HTML (HyperText markup language) documents. HTML documents can be linked to one another, as well as to graphics, audio, and video files. This means you can jump from one document to another simply by clicking on hyperlinks on a Web page. Web browsers (such as Netscape and Firefox) make it easy to access the World Wide Web.

**Young-old and oldest-old:** two subgroups of the older, or age 55+ population. The young-old are the 55-to-75 age group. The oldest-old are age 85 and older. The young-old are distinguished from the middle-aged primarily by retirement, and distinguished from the old-old by continued vigor and active social involvement.

# *Research Methods*

## I. INTRODUCTION AND OVERVIEW

Life course researchers face the formidable challenge of answering the question, Why and how do individuals' lives turn out the way they do? Although most people, at one time or another, want to find out what makes people tick, social scientists are unique in that they use rigorous scientific methods to documents patterns of human thought and behavior. Rather than simply observing one person, or asking an individual about his or her life, life course sociologists are interested in documenting behavior at the *population level*, and also are interested in identifying *subgroup differences*, such as race, ethnic, gender, and birth cohort differences in how human lives unfold. Life course sociologists also are interested in the study of *whole lives*, rather than studying isolated stages, such as adolescence or old age only. They seek to uncover how early life experiences shape one's adulthood and later years; as such, documenting causal relationships is a critical goal. These substantive aims are the guiding force beyond life course researchers' choice of appropriate research methods. *Research methods* refer to the diverse modes of investigation used to gather empirical (or factual) material about social behavior.

This entry briefly summarizes the research goals of life course scholars, discusses how research goals guide the selection of one's research method, describes the main qualitative and quantitative research methods used by life course scholars, summarizes analytic strategies used by quantitative researchers, and offers examples of important life course studies that exemplify the broad range of research methods available. The topic of research methods is an extremely complex and challenging one; scholars can devote years to learning about methods and perfecting their analytic skills, and they often must have strong backgrounds in statistics in order to successfully carry out life course research. This entry focuses on the ideas behind research methods, rather than the precise statistical techniques and software packages used to conduct research. After reading this entry, however, students of the life course should be able to read and understand research articles using a wide range of methods and should be able to select an analytic approach that best fits with their own substantive research goals.

### GOALS OF LIFE COURSE RESEARCH

Social scientists typically have three broad goals: to describe social reality; to identify correlations between two or more behaviors or characteristics; and to test causal hypotheses. *Describing social reality* might involve describing population-level trends, such as documenting the proportion of all 18-year-olds in the United States who have graduated high school, or calculating the average age at which people first marry. Social scientists also describe subgroup differences in social reality, by comparing individuals from different birth cohorts, racial or ethnic groups, or nations. For instance, life course sociologists might examine whether the proportion of people who cohabit prior to marriage is higher in Sweden than in the United States. Researchers might also investigate whether Blacks and Whites differ in their rates of infant mortality or in their overall life span.

Most researchers calculate simple *descriptive statistics* as a way to describe reality: Descriptive statistics include the *mean* (or average) value of some population-level

attribute, or a *frequency distribution*, which refers to the proportion of people in a population who fall into each of several mutually exclusive categories, such as the proportion who are single versus married. In order to evaluate whether two subpopulations are different from one another, analysts can use formal statistical tests to ascertain whether subpopulation means or frequency distributions are significantly different from one another. Statistical tests such as *t-tests* can be used to compare means, while *chi-square tests* can be used to assess whether the frequency distribution of a particular attribute differs significantly across subgroups.

A second goal is to detect whether a *correlation*, or a statistical relationship, exists between two or more behaviors and characteristics. Two constructs are correlated if a change in one construct is associated with a systematic change in the second construct. A correlation may be *positive*, where both constructs change in the same direction, or *negative*, where the constructs change in opposite directions. For example, height and weight are usually positively correlated; as height increases, one's body weight also tends to increase. By contrast, absenteeism and school grade point average are negatively or inversely correlated; the more days a child is absent from school, the lower his or her school grades. A data analyst would calculate a *zero-order correlation* to detect the strength and direction of the relationship between two attributes. A correlation of 0 means that two constructs are completely unrelated, whereas a correlation of 1 means that the two constructs are perfectly related. For example, the correlation between height and weight is usually about .70, which is quite high. Importantly, *correlation is not causation*. A zero-order correlation cannot tell us what variable "caused" the other; it simply tells us the strength and positive or negative direction of the relationship. A third goal is to *test causal hypotheses*. A causal hypothesis is a statement that differences in one behavior or event produce a difference or a change in another behavior. When developing causal hypotheses, researchers typically identify an independent variable and a dependent variable. An *independent variable* is a measure that is purported to have an effect on another measure. The measure affected is the *dependent variable*. It is very difficult, however, to establish causation in the social world; there are too many competing hypotheses and characteristics to take into consideration. It is not always clear which construct is the independent variable and which is the dependent variable. Nevertheless, data analysts use a variety of strategies to try to ascertain causation. *Experiments*, described below, are considered the single best way to establish causation. Yet statistical analyses of survey data, especially longitudinal data, where data are collected at multiple points in time, can also be used to evaluate causal hypotheses.

An important guideline when trying to establish causal relations is to think logically and sensibly about human behavior. For instance, some studies have shown that age is negatively correlated with political liberalism—that older persons endorse more conservative political views than their younger counterparts. It is plausible, then, for a young scholar to hypothesize that advanced age may "cause" an individual to cast a vote for a Republican rather than a Democratic political candidate. The reverse is implausible; one's political identity cannot "cause" one's age! In most cases, however, the answer is not so simple. For example, if a researcher finds a positive correlation between body mass index (an indication of one's weight-to-height ratio) and depressive symptoms, can one then necessarily conclude that gaining weight causes a person to become depressed? An equally plausible hypothesis is that unhappy people cope by overeating, or they may lack the energy to maintain an effective exercise regimen.

A further challenge is to figure out whether a purported independent variable *really* predicts the dependent variable, or whether a variety of intervening factors account for the observed statistical association. The most widely used strategy for figuring out whether a correlation between variables is a causal connection is the use of statistical controls, meaning some variables are held "constant" when researchers try to identify and isolate the effect of the purportedly causal variable. For example, some scholars have documented that maternal deprivation is correlated negatively with psychological adjustment in adults. Is it really the case that parent–child separation has direct long-term consequences for the child's well-being? Or is there some other plausible explanation?

Thoughtful researchers would try to generate a list of possible alternative explanations and then would statistically "control" for these measures in their analysis of data. For example, one source of maternal deprivation is a child's hospitalization. Children who are in poor health may be separated from their parents during long hospitalizations; it is plausible that the child's poor health accounts for the observed statistical linkage between maternal deprivation and the child's adult mental health. Likewise, mothers may be separated from their children if they themselves have a mental health problem or if they are imprisoned. Both of these maternal characteristics may expose a child to multiple stressors, which may in turn carry serious long-term consequences. This example reveals the difficulty and complexity of testing causal hypotheses about life course processes and outcomes.

## SELECTING A RESEARCH METHOD

Before a social scientist can describe patterns of human behavior, he or she must first collect and analyze data.

Data collection is a systematic procedure for amassing information about a well-defined population on some well-defined topic. Data collection and analysis methods typically are classified as either "qualitative" or "quantitative." The choice of a research approach should always be motivated by the researchers' substantive goals and questions. Qualitative researchers usually are interested in rich descriptions of social phenomena, but are less concerned with ascertaining causal ordering. For this reason, they obtain rich, in-depth data on small samples, usually by observing them firsthand or by conducting unstructured face-to-face interviews.

Quantitative researchers, by contrast, typically are interested in documenting large-scale patterns, identifying subgroup differences, tracking changes over time, and testing causal hypotheses. For this reason, most quantitative researchers rely on large-scale structured surveys. Experimentation is another method used by quantitative researchers to document causal relationships, although life course sociologists rarely use experiments; rather, this is the preferred method of psychologists. The next sections provide glimpses into each of these research approaches and examples of how each method can be used to investigate questions at the core of life course scholarship.

**Qualitative Research.** Qualitative researchers aim to obtain an in-depth understanding of human behavior, thoughts, and feelings. Simply put, they investigate the *why* and *how* of social behavior, not just *what*, *where*, and *when*. Such researchers thus need smaller but focused samples rather than large random samples. Qualitative research is well suited to generating rich descriptions of social processes and obtaining individuals' own accounts, interpretations, and explanations for their behavior. However, because qualitative studies often focus on small, highly focused populations—such as homeless persons, cult members, Amish persons, and other statistically rare groups—the study findings are seldom generalizable to larger populations. As a result, qualitative research often has poor *external validity*.

Qualitative researchers typically rely on three methods for studying human lives: participant observation, direct observation, and in-depth interviews. *Participant observation* occurs when the researcher takes part in the activities of the group or community being studied. In doing so, the researcher often wins the trust of his or her research subjects and thus can elicit frank and honest insights from them. However, findings from participant observation studies have been critiqued on the grounds that they are not "objective." Further, such studies can raise ethical issues; social scientists often need to hide their true identity because research subjects may not always be forthright and honest with a scientist, for fear of reproach or in some cases (such as in studies of deviant subcultures) for fear that they could be subject to legal action.

The classic example of participant observation is Laud Humphreys's *Tea Room Trade* study (1970), which investigated the social behavior and relationships of gay men. At the time that Humphreys conducted his study, homosexuality was still a stigmatized identity and few people would come forth to talk openly about their sexuality. Many gay men were married and leading "straight" lives. Humphreys studied gay men by participating in the activities that happened at bathhouses, the public restrooms where gay men would meet for sex. Humphreys took on the role of "lookout" or guard, meaning that he would warn the others if he noticed police, children, or others were coming to use the restroom. Although this study is considered a classic study of gay men's behavior in the mid-20th century, it is also criticized because Humphreys did not confess that he was a researcher. Still, this approach enables life course researchers to study social contexts and behaviors that are stigmatized and "hidden" in modern society.

*Direct observation* is similar to participant observation, except the researcher does not join the activities or group under observation. The investigator also informs the research subjects that they are part of a study. In both participant and direct observation, the social scientists do more than simply observe; they take copious notes or recordings and try to detect patterns in the behavior they witness. One of the best examples of direct observation is the sociologist Annette Lareau's study *Unequal Childhoods* (2003). Lareau investigated parents' child-rearing practices in poor, working-class and middle-class families. She shadowed 12 families for about a month, engaging in "intensive 'naturalistic' observation" of parenting habits and family culture. She watched the parents and children interact after school, during family meals, and just going about their daily activities at home. Lareau found that parenting methods vary by social class more than by race. Middle-class parents, whether Black or White, engaged in a process of "concerted cultivation" designed to draw out their children's talents and skills. Working-class and poor families, by contrast, relied on "the accomplishment of natural growth." These parents believed their kids would turn out just fine, as long as basic comfort, food, and shelter were provided. Lareau's observations allowed her to uncover an important pathway through which social class shapes child outcomes: parental engagement.

*In-depth interview* is the process in which researchers ask probing questions of their subjects and either tape-record, videotape, or transcribe the subjects' words. The questions used are typically "open ended," meaning that

research subjects can answer the questions any way they like. Researchers may start their investigation with a preset list of questions, but the interviews often take on a life of their own and have the flow of a natural conversation. Although surveys also ask questions of their respondents, survey questions tend to be "closed ended" and heavily scripted; respondents are asked to select the response option that best represents their views. The same set of survey questions is also used for all study participants, so a survey cannot capture the same idiosyncratic responses that an in-depth interview can.

Because of the open-ended nature of in-depth interviews, this approach often uncovers findings that could not have been detected with closed-ended surveys. Research subjects may hold beliefs or may engage in practices that the researchers had never before thought about and thus would never dream to have asked a question about. This is the case with Kathryn Edin and Maria Kefalas's 2005 study *Promises I Can Keep: Why Poor Women Put Motherhood Before Marriage*. Over a span of 5 years, Edin and Kefalas talked in-depth with 162 low-income single mothers in Philadelphia to learn how they think about marriage and family. In particular, they wanted to know why poor urban women continue to have babies out of wedlock, often knowing that having a child will hurt their own educational and work prospects—as well as impairing the child's chances for economic success.

Edin and Kefalas found that the young women do not get pregnant by accident but enter teen parenting knowingly. The authors observed that

> to most middle class observers . . . a poor woman with children but no husband, diploma or job is either a victim of her circumstances or undeniable proof that American society is coming apart at the seams.. . . But in the social world inhabited by poor women, a baby born into such conditions represents an opportunity to prove one's worth. (p. 6)

While the poor women they studied perceived marriage as a "luxury"—"something they aspired to but feared they might never achieve"—having children is viewed as a necessity and "an absolutely essential part of a young woman's life" (p. 6). Such insights could not have been gleaned from a survey that simply asked women their age at first birth and whether the birth of their child was intended. Edin and Kefalas also characterized a subpopulation that may not have participated in sample surveys, as they often did not have home telephones, and might have distrusted survey researchers who asked curt questions about their life choices. Taken together, qualitative studies are particularly good at investigating the role that personal agency and preferences play in the life course, by obtaining firsthand observations and holding in-depth conversations.

**Quantitative Analysis.** The vast majority of life course researchers use quantitative research techniques, particularly the use of multivariate methods to analyze survey data. A small yet growing number of sociologists also are starting to use experimental designs.

***Experiments.*** Experimentation is a mode of investigation that typically is employed by psychologists. Historically, sociologists have not conducted experiments because most such studies take place in artificial laboratory settings and thus do not capture the important ways that macrosocial and historical context shape social lives. Sociologists, however, have recognized the many unique methodological strengths of experiments, including the ease with which causation can be ascertained.

The experiment is the most highly controlled of all research methodologies and thus has very high *internal validity*. Internal validity means that the study findings cannot plausibly be accounted for by some extraneous influence or by a variable that was not statistically controlled. By design, all potential extraneous influences are held constant in experiments. First, the researcher must first manipulate one or more of the independent variables hypothesized to have a causal impact on the dependent variable. The experimenter creates at least two levels of each independent variable—although more than two levels are possible. Next, the researcher must assign subjects randomly to the two groups or treatments. Random assignment is crucial because it is a way to eliminate extraneous influences.

The sociologist Devah Pager (2003) designed an innovative experiment to examine the long-term consequences of prison on the lives of felons. She conducted a field study, meaning that she used the procedure of random assignment, but she did so in a real-life setting. To evaluate the effect of a criminal record on one's job prospects, she hired actors and sent them on a job search. She sent pairs of young, well-groomed, well-spoken college men with identical resumes to apply for 350 advertised entry-level jobs in Milwaukee, Wisconsin. Two of the pairs were White men, and two were Black men. The only difference between the two men in each pair was that one said that he had served an 18-month prison sentence for cocaine possession. The independent variable Pager manipulated was whether one had a prison sentence; by ensuring that all applicants were identical in terms of their job qualifications, mode of dress, demeanor, age, and gender, she essentially "held constant" the possible factors that could pose a threat to alternative causal influences.

Pager's study found that a criminal mark had a detrimental effect on one's job prospects. More importantly, though, she documented that this effect was much more harmful to Black men than White men. For the Black testers, their callback rate from employers was 5% if they had a criminal record and 14% if they had a clean record. By contrast, for Whites the callback rate was 17% for those with the criminal record and 34% for those with a clean record. Pager's study is a powerful demonstration that a critical life transition—such as becoming a felon—affects the life course differently based on one's race. Despite the importance of Pager's work, however, relatively few topics that are central to life course research are suitable for experimental designs.

***Surveys.*** Surveys make up the foundation of life course research. Surveys are so important that the encyclopedia includes three separate entries describing the different types of surveys conducted and provides summaries of nearly 24 different surveys that provide the data for many highly influential life course studies. This section briefly recaps the basic characteristics of surveys, including their strengths and the variety of forms they take.

A survey is a procedure for collecting information by asking members of some population a set of standard questions and recording their responses. One type of survey, a *census*, is administered to all persons in a nation's population. For example, the U.S. Census is conducted every 10 years, and information about each and every American is recorded. Data from the census are considered the single best data source for describing the characteristics of the U.S. population. For instance, researchers use census data to document that the U.S. population nearly quadrupled between 1900 and 2000, climbing from 76.1 million to 281 million. Census data also reveal that the proportion of the U.S. population that is elderly (over age 65) jumped from 4.1% in 1990 to 12.4% in 2000 (U.S. Bureau of the Census, 2002).

The vast majority of surveys, however, are sample surveys, meaning that a subsample (or a percentage of the pool of eligible survey participants) participates. The highest quality surveys are *random-sample surveys*, meaning that every person in the sampling frame is equally likely to be selected for participation. Participants are drawn from a sampling frame, or the full range of persons who are potential subjects of research. Some surveys, including general-interest surveys conducted by the U.S. government, such as the Current Population Survey, are administered to a subsample of the total U.S. population. Other surveys, however, have a much more tightly defined sample frame. For instance, the Wisconsin Longitudinal Study (WLS) interviewed a randomly selected one-third sample of all persons who were high school seniors in the state of Wisconsin in 1957. While the WLS enables life course scholars to document the experiences of only a single birth cohort, other surveys are designed to characterize the experience of multiple birth cohorts, thus enabling researchers to examine the impact of social change on human lives. For example, the Health and Retirement Study (HRS) began in 1992 as a random-sample survey of preretirement age men and women born between 1931 and 1941, with new younger cohorts brought in at subsequent waves. The HRS data can be used to answer questions such as: Are there cohort differences in the age at which people retire or in the economic well-being of retirees?

Some surveys are conducted in a *face-to-face setting* or over the *telephone*, with hired interviewers asking subjects a standard set of questions. Surveys also can be administered via a *self-administered mail questionnaire*. Here, subjects are mailed a survey instrument to complete and return. Mail surveys have the disadvantage of low response rate (i.e., a low proportion of persons send back their completed survey), yet face-to-face interviews have the downside of high cost and the possibility that subjects may not be truthful in answering the interviewers' questions. Interviewers can help to ensure that high-quality data are collected, however, by explaining the question to interview subjects and prodding them to answer a question that they might want to skip.

Surveys typically consist of a series of *closed-ended questions*, meaning that study participants are forced to select their response from several preset categories. The content of most surveys is far ranging and diverse, often asking about social background, work and family experiences, physical and mental health, social relationships, political participation, and financial characteristics. Nearly each and every response can be quantified in some way; this process of transforming social and psychological concepts into quantifiable, easily observed measures is called *operationalization*. Operationalization enables researchers to conduct statistical analyses of survey data.

For instance, one's educational accomplishments typically are measured as "number of years of school completed," while one's level of mental health can be assessed and given a numerical score using a standard measure such as the Center for Epidemiologic Studies Depression (CES-D) scale (Radloff, 1977). Even seemingly qualitative experiences, such as being married or living in a dangerous neighborhood, can be quantified. Marital status is generally measured as a series of categories, and each category—married, single, or widowed—is assigned a numerical value. Likewise, contextual factors such as living in a dangerous neighborhood can be quantified by assessing the number of crimes that happen on one's city block or the proportion of families receiving federal aid who live in

one's census tract. These measures, in turn, can be used by researchers seeking to document correlations and evaluate causal hypotheses, as discussed above.

Surveys are well suited for obtaining self-reported information on attitudes, values, and past behaviors. They also are the most effective method for documenting within-person change over time and historical change, because the same survey questions can be administered at multiple points in time, thus enabling comparisons. Surveys are not particularly good, however, at assessing behavior that happened in the distant past, because subjects may have difficulty in accurately recalling their past experiences. For life course researchers, this is particular problematic. Life course researchers have documented a pattern called *retrospective recall bias*; people will sometime reconstruct their past so that it is consistent with their current mood or feelings. For instance, a person who is now depressed may say that his or her childhood was very unhappy, even if he or she actually felt quite happy during that period.

Survey designs may be cross-sectional or longitudinal. A *cross-sectional survey* is conducted at one point in time; it captures a snapshot of a group of people at one historical moment. Some studies, however, are *repeated cross-sections*, meaning that a snapshot will be taken at multiple points in time, although different persons are interviewed at each time point. This approach allows researchers to document historical changes in values, attitudes, and behaviors. The General Social Survey is one of the nation's most widely used repeated cross-sectional surveys. A new sample of American adults is interviewed every two years. Thus, researchers can examine such questions as: Have attitudes toward abortion changed over the past three decades? Such data, however, do not allow researchers to explore whether and how an individual's own attitudes toward reproductive rights change as they age.

A *longitudinal study* involves reinterviewing the same people at multiple points in time. This enables researchers to examine within-person change and also adopt a whole-life approach to conducting research. Some of the most widely respected and influential studies of the life course draw on longitudinal data. John A. Clausen's *American Lives* study (1993) is based on data from the Berkeley and Oakland Growth Studies. In the late 1920s, a group of children were recruited into a study on child and adolescent development and were subsequently tracked over a 60-year period. The WLS, mentioned earlier, obtained data on a cohort of Wisconsin high school graduates when they were ages 18, 35, 53, and 64. Both of these rich data sources allow researchers to explore the long-term consequences of early choices and experiences.

## STRATEGIES FOR ANALYZING SURVEY DATA

Life course scholars often use sophisticated statistical methods to investigate causal relationships among the characteristics assessed on surveys. A complete understanding of these statistical techniques requires a strong background in algebra and, for some methods, calculus. For this reason, a comprehensive description of data analysis methods is beyond the scope of this entry. This brief "nonmathematical" introduction is intended to help readers identify: (a) how to choose a research method suitable to their research question and data availability; and (b) how to interpret coefficients and empirical results when reading quantitative studies in social science journals and books. Before reading this section, however, readers are advised to first review the encyclopedia entries on Variables and Correlation Versus Causation. Readers also may want to familiarize themselves with a statistical analysis software package such as SPSS, SAS, or Stata; these are among the most widely used (and user-friendly) software packages for conducting the types of analyses described below.

**Ordinary Least Squares Regression.** Ordinal least squares (OLS) regression is the most widely used statistical technique used to evaluate causal hypotheses about the life course. This method allows researchers to predict a *continuous* life course outcome, such as years of schooling, earnings, one's score on a self-esteem or depressive symptoms scale, or the number of functional limitations one has. In general, OLS regression is used to answer questions such as: How well can one predict the value of one variable, such as annual income ($Y$), by knowing the values of another variable, such as level of education ($X$)? The regression equation is written as: $Y = a + b_1X_1 + b_2X_{2\ldots} + e$ where $Y$ is the dependent variable, $X$ is the independent variable, $b$ is the slope or regression coefficient, and $a$ is the intercept (the value of $Y$ when all independent variables equal zero). The $e$ is the error term.

For example, life course researchers interested in income inequality may want to identify characteristics that affect one's yearly income. Here, education ($X_1$) is measured as a continuous variable (e.g., 0 to 24 years of schooling), gender ($X_2$) is a dichotomous (or two-category) variable where female = 1 and male = 0, and income ($Y$) is the continuous outcome variable: INCOME = 10,000 + $200X_1$ + $-1{,}000X_2$. This equation shows that for a man ($X_2 = 0$) with 0 years of education, one's annual income would be \$10,000. With each additional year of schooling, his income would go up by \$200 (because $b_1 = 200$) when sex is statistically controlled or "held constant." Being female, however, would be associated with a \$1,000 decrease in income (because $b_2 = -1{,}000$), when education is held constant.

**Logistic Regression.** Logistic regression, also referred to as logit models, is a special form of regression that is used when a study's outcome measure is *categorical. Binary* logistic regression is used when an outcome measure or dependent variable is a dichotomous or "dummy" variable, scored as 0 or 1. *Multinomial* logistic regression is used when the dependent variable has three or more mutually exclusive categories. For instance, binary models are used to predict whether one is married versus single, whereas multinomial models are used to predict whether one is married, separated, divorced, widowed, or never married.

Binary logistic regression models usually are used for predicting whether or not an event has happened to an individual, such as death, graduation, marriage, or release from prison. This method also is used to document whether one holds a specific social role, such as part-time worker, full-time worker, or unemployed person. It also is used to identify the predictors of some outcome that is generally considered qualitatively good or bad, such as being obese versus normal weight, and having high blood pressure versus normal blood pressure. The predictor variables used in such analyses may be either categorical (e.g., high school graduate or higher = 1; high school dropout = 0), or continuous (e.g., education in years equals 0 through 24). The model is based on transforming data by taking their natural logarithms so as to reduce nonlinearity.

A mortality study can serve as an example of how logistic regression works. In studies of mortality (that is, whether one is dead or alive) in which age of death is not known, logistic regression models are frequently used. In such cases, one might have survey data on study participants at Year 1 (e.g., 1990) and then data from follow-up interviews at Year 10 (e.g., 2000). Perhaps the researcher knows that one of the original respondents from 1990 has died by the time of the 2000 interviews, yet the person's age of death is not known. In such a model, all the people who died between 1990 and 2000 would be coded as 1 (i.e., they experienced the "event" of death); all those who survive are coded as 0 (i.e., they did not experience the "event" of death). The analyst would then use the independent variables measured at Year 1 to assess the odds or likelihood that a respondent has died between 1990 and 2000. The interpretation of the independent variables depends on how they are presented in a given table.

Results for logistic regression are generally presented in one of two ways. One strategy is to present the beta values, or coefficients, before they are exponentiated. The other way shows the exponentiated beta values, or the odds ratio. For example, Table 1 includes data on the effects of different levels of educational attainment on the odds of dying, between interview at Time 1 (1990) and interview at Time 2 (2000). The independent variable of interest is educational attainment. The "reference group" or "omitted category" (that is, persons who provide a benchmark for evaluating relative differences) is persons who have 12 years of education. For the reference group, the relative odds of dying (or being in the "1" category of the dependent variable) always equals 1. The other variables are interpreted "relative to" the reference group. To interpret the parameter estimate for high school dropouts, one calculates $\exp^{.1758} = 1.19$. (This can be calculated on a calculator using the $e^x$ key.) What does this mean? Relative to persons with a high school education only, persons who were high school dropouts were 1.19 times as likely to die between 1990 and 2000. The table generally shows that increased education is associated with reduced odds of death.

A multinomial logistic regression is very similar to binary logistic regression. The main difference is that the dependent variable may include more than two categories. For instance, rather than predicting the odds of death in 2000, a researcher might predict the odds of death due to cancer, death due to heart disease, and death due to other causes. The reference group would be "alive." Coefficients are interpreted the same as in the binary logistic regression example. The one difference is that the output would show as many columns of results as there are nonzero categories of the dependent variable.

**Event History Analysis.** Event history analysis, also referred to as hazard models, survival analysis, or duration analysis, is a strategy ideally suited to addressing life course questions about timing. This approach is used to assess how long an individual exists in a given state before making a transition to another state. It is similar to logistic regression analysis in that it allows researchers to predict movement from one dichotomous state to another, such as the movement from dead to alive, single to married, or prisoner to parolee. Whereas logistic regression predicts *whether* one held a specific role or had made a particular transition, event history can be used to specify *how old* one was when they made such a transition, or *how much time* one spent in a particular role before moving into a new role, such as how long one was married prior to having a first birth. To

| Variable | Parameter estimate(B) | Odds (expB) |
|---|---|---|
| <12 yrs education | .1758 2 | 1.19 |
| 12 education (reference) | ***** | 1.00 |
| 13-15 yrs education | -.0307 | .969 |
| 16+ yrs education | -.0838 | .919 |

***Figure 1.*** CENGAGE LEARNING, GALE.

conduct these analyses, however, researchers must have data on the age at which a person makes a transition into the new state (for people who do make the transition—not all do). The specific equations used in event history analysis vary. A basic model is: log $h(t) = a + b_1x_1 + b_2x_2$. *Here, b* is the slope or regression coefficient, while *a* is the intercept. The *a*, $b_1$, and $b_2$ are the constants to be estimated, while x is the observed value of some characteristic measured in the survey. In this equation $h(t)$ is the hazard rate. A hazard rate can be generally described as the probability that an event will occur at a particular time to a particular individual, given that the individual is "at risk" at that time. "At risk" means that one is a plausible candidate for the life transition of interest. For example, those women at risk of making the transition to motherhood are women who have not already given birth. Persons at risk of returning to prison are those who have already exited prison; those who are still in jail are not at risk of returning.

When interpreting coefficients from an event history analysis, scholars generally follow the rules that apply to logistic regression models. Table 2 shows results for a proportional hazard model (i.e., one variant of a hazard model). These data are used to examine prison recidivism, or whether a person returns to prison following his or her release. In this study, men were tracked for a year after leaving prison. The event of interest is "first arrest after release." Also of interest is the timing of the arrest (how many months was a man out of prison before his new arrest?). The coefficients indicate not only whether or not a transition was made but also the "speed" of the transition. When reading results for hazard models, one should know the time unit that is the basis of analysis (e.g., number of months before returning to prison, number of years after age 15 that a person marries). See, for example, the data in Table 2. Interpreting the coefficients in this table is much like interpreting unstandardized regression coefficients. The coefficient of -.069 for age at release means that each additional year of life reduces the log of the hazard by .069, controlling for other variables. One can also exponentiate the betas to make the findings more "intuitive." The coefficient for number of prior arrests is .095. Exponentiating this (as in logistic regression) gives the value of 1.10. This means that each additional prior arrest increases the hazard of recidivism by 10%.

Hazard models are preferable to logistic regression models for two reasons. First, hazard models allow researchers to incorporate timing data. Thus, analysts do not simply estimate the predictors of whether one died between 1990 and 2000; rather, they predict one's age at death, or age of transition. Additionally, this approach allows some predictor variables to change over time; that is, it allows use of *time-varying covariates*. When a researcher analyzes a longitudinal data set, they might have indicators of a person's health status, marital status, or employment status for every

| Independent Variable | b | t |
|---|---|---|
| Age at release | -.069 | 2.94** |
| Received financial assistance upon release | -.325 | -1.76 |
| Number of prior arrests | .095 | 3.21** |

***Figure 2.*** CENGAGE LEARNING, GALE.

year. They can then set up their data file so that they have yearly specific indicators of health, for instance. Certainly, this is preferable to assuming that one's health status or marital status at Time 1 will persist for the entire course of the observation period.

Hazard models can take on many mathematical forms; these forms represent notions about time. One characteristic along which models differ is *functional form*, or one's assumptions about the distribution of events over time. The most basic model is the proportional hazard model. This model does not impose a "functional form," meaning that the analyst does not impose on the data any assumptions about the odds of making a transition over time. There are specific models, such as the Gompertz, in which the researcher does make assumptions about the functional form. For instance, Gompertz models are based on the assumption that the odds of making a transition increase with duration (e.g., advanced age, number of months since exiting prison). Not surprisingly, this form is often used to study adult mortality. The odds of dying increase with advanced age. This form would not work, however, if a researcher was studying transitions from singlehood into marriage. Certainly, the odds of marrying do not increase steadily and monotonically over the life course.

Sometimes researchers want to explore the transition from one state to a variety of possible alternative and mutually exclusive states; such analyses would require the use of *multistate hazard models*. These models are similar to multinomial logistic regression models in that analysts are predicting movement into one of several competing states (e.g., dead due to cancer, dead due to heart disease, dead to other causes, or alive). In sum, hazard models are the best method for examining the factors that influence when individuals make important life transitions such as marriage, first birth, first full-time job, retirement, and ultimately, death.

**Other Advanced Statistical Methods.** Life course researchers may select from a variety of other complex statistical methods, based on their research question. Two additional approaches are elaborated elsewhere in the encyclopedia: Network analysis is described in a separate entry, and twin study designs are discussed in the Genetic Influences

entries. This section briefly describes three methods that enable researchers to tackle issues at the core of life course studies: multilevel modeling, structural equation modeling, and latent growth curve analyses. Rather than describing how to interpret coefficients, as was done for the methods discussed above, a conceptual overview is provided along with examples of life course research using these analytic techniques.

*Multilevel modeling* is a statistical approach used by analysts who want to examine the ways that both individual-level and group-level characteristics affect one's life course outcomes. This approach is based on the assumption that individual lives are shaped by social contexts such as their neighborhoods, schools, and families. This method requires that researchers use data that characterize both the individual (e.g., a student in a particular school) and the group (e.g., characteristics of a school that a particular child attends). Thus, multilevel models can identify differences *within* and *between* diverse social contexts. For example, researchers may examine whether living in a neighborhood with a high poverty rate is associated with elevated levels of stress among individuals living there. Researchers recognize, however, that individuals do not randomly assign themselves to neighborhoods; persons who live in poor or crime-ridden neighborhoods may have other traits that are associated with elevated stress levels, and these traits matter above and beyond one's residential locale.

Several early-21st-century studies based on the National Longitudinal Study of Adolescent Health (Add Health) data have used multilevel modeling techniques such as hierarchical linear modeling in order to estimate the effects of both school- and individual-level characteristics on the life course trajectories of adolescents. For example, Igor Ryabov and Jennifer Van Hook (2007) used these data and techniques to examine whether the ethnic and social-class composition of one's high school affected Latino students' academic achievement, and whether these effects vary by the student's generational status. They found that the socioeconomic composition of the school but not the racial composition was an important predictor of Latino adolescents' scores on a standardized aptitude test. They also found that the effects of school composition on the teen's grade point average (GPA) varied by the person's generational status. School socioeconomic status (SES) had a positive effect and school minority composition a negative effect on GPA for foreign-born Latinos only. The authors reasoned that high levels of social capital in immigrant families help buffer children from the disadvantages associated with the schools they attend. In sum, multilevel models allow researchers to explore the ways in which social place and context shape the individual life course.

*Structural equation modeling* (SEM), also referred to as path analysis, is another strategy that enables researchers to explore questions about the multiple direct and indirect influences on the life course. The best way to develop a conceptual understanding of SEM is to think about how these models are similar to, yet expand upon, OLS regression models. SEM is generally used in one of the following three cases. First, a researcher may want to examine two-way causation, or a nonrecursive relationship. For example, rather than doing an OLS regression that predicts the effect of media violence on aggressive behavior, a researcher may also consider the possibility that aggressive behavior leads one to seek out violent media. Second, a researcher may have multiple measures of a construct and may be interested in the effect of the overall construct as well as the degree to which each of its distinct indicators influence the life course. For example, a researcher may believe that a factor called "social background" influences children's school performance, where social background is a construct made up of father's education, mother's education, household income, and number of siblings. Third, a researcher may be interested in both direct and indirect effects of an independent variable on some outcome variable. Many research articles using SEM display indirect and direct effects in a *path diagram*, or a visual image of the set of hypothesized relationships.

SEM techniques enabled the sociologists William H. Sewell and Robert M. Hauser (1975) to identify the ways that parents' social class affects their children's educational and occupational attainment. Using data from the Wisconsin Longitudinal Study, a study that has tracked all Wisconsin high school graduates from the class of 1957 for more than 50 years, the researchers wanted to determine why and how family background affects children's achievements. SEM allowed them to consider a detailed composite measure of parents' social class encompassing education, occupational status, earnings, and farm status. The researchers also found that parents' SES affected a son's educational and occupational outcomes *indirectly*. Boys from higher SES homes received more encouragement from their high school teachers, peers, and parents, and also received better grades. These positive high school experiences, in turn, led to more lofty educational and career aspirations. These high aspirations, in turn, were associated with achieving higher status jobs after completing school. By using elaborating SEM models, the researchers were able to identify the pathways through which social class is transmitted from parents to children.

*Latent growth curve* analyses enable researchers to track within-person change over time. In this modeling strategy, the data analyst must have observations from study participants for at least three points in time. The researcher can then not only document the factors that predict one's value on some variable at the first wave of data collection, but can also pinpoint the factors that are

associated with trajectories of improvement and decline over time. This is a complex strategy, but it is becoming increasingly popular as more and more data sets obtain multiple observations of their study participants.

Some excellent examples of the use of growth curve models are studies by the research team of K. A. S. Wickrama, Frederick O. Lorenz, and Rand D. Conger. They studied a sample of 451 farm families in Iowa over a 10-year period, exploring the ways that family and economic factors affect health and well-being. They have found that declines in marital quality are associated with downward trajectories in physical health (Wickrama, Lorenz, Conger, & Elder, 1997); that changes in one's level of workplace control are associated with changes in men's physical and mental health during midlife (Wickrama, Surjadi, Lorenz, & Elder, 2008); and that parents' parenting style affected their teenage children's health trajectories, yet the effects operated indirectly, via the child's perception of parental support (Wickrama, Lorenz, & Conger, 1997). These studies demonstrate the importance of linked lives; generations of parents and children influence one another, while diverse life domains such as work, marriage, and health are intertwined. Latent growth curve models also allow life course researchers to move away from static one-time snapshots of health and well-being and instead document that health declines and improvements are shaped by changes in one's larger social and role networks.

## CONCLUSION

Life course research is guided by four key assumptions: that social lives are shaped by history, that the timing of key life events matters, that individuals are planful and guide their own life courses, and that life domains are interlinked. Researchers have access to a broad range of methods that allow them to describe the human condition, assess interrelationships among individual's characteristics, and evaluate claims about causation. Investigators may choose to conduct in-depth open-ended interviews to understand the ways in which individuals think about their lives and make choices. They may rely on large-scale surveys to document the ways in which social history, race, class, gender, and national origin shape the life course. Despite the diversity of research approaches taken, successful life course researchers typically follow one golden rule: They use the data and methods best suited to addressing their own unique research aims.

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***Deborah Carr***

# II. CORRELATION VS. CAUSATION

Research projects concerning the life course and human development require particular attention to methodological concerns. One of the most important of these is the

distinction between correlation and causation. *Correlation* means that two variables or observations are associated with one another, or that one observation/event occurs or changes when the other does (Babbie, 2001). For example, one might find that frequencies of outdoor weddings decrease at the same time that the number of people visiting the beach decreases. Therefore, frequency of outdoor weddings is correlated with beach attendance. Although these two observations vary together, or correlate, a decrease in outdoor wedding frequency does not cause beach attendance to decrease or vice versa. *Causation* means that one observation results from another, either directly or indirectly (Blalock, 1964). While frequency of outdoor weddings and beach attendance are correlated, their relationship is spurious (or noncausal). It is simply the case that both outdoor weddings and beach attendance decrease during the winter months. The discomfort of cold weather causes not only a decrease in beach attendance but also a decrease in outdoor weddings. A lower frequency of outdoor weddings and lower beach attendance are *correlated*, but both effects are primarily *caused* by cold weather.

The distinction between correlation and causation may seem fairly obvious in the example of outdoor weddings and beach attendance, but causation is often much more difficult to assess. When studying the events and trajectories of human lives, the distinction between correlation and causation is very important. For example, one may notice that an increase in the frequency of socializing with friends and family in a sample of individuals is correlated with better health in that sample (House, Umberson, & Landis, 1988). One's initial conclusion might be that those who have extensive social support networks are healthier. Thus, an active social support network causes, at least in part, better health. What if, however, those who are healthier are more likely to socialize to begin with? Or, perhaps increased social interaction causes better mental health, which, in turn, causes better physical health? Perhaps these causal pathways also vary by age, gender, race, or class.

## CONDITIONS FOR CAUSATION

There are three commonly accepted criteria for establishing causation in the social sciences (Babbie, 2001). First, the causal force must precede the result in time. So, in the above example of the causal relationship between social interaction and health, an individual must have social support prior to an improvement in physical health. Second, the two observations or events must be correlated. For social support to cause improved health, a researcher must observe an association between social support and health, or note that the two vary with one another. The third criterion for causation is that there are no other possible explanations for the correlated relationship (nonspuriousness). A researcher must demonstrate that all alternative explanations are irrelevant. The combination of correlation, temporal order, and nonspuriousness establishes grounds for causation.

## VARIABLES AND PATHWAYS TO CAUSATION

To help clarify the distinction between correlation and causation, it is crucial to have a basic understanding of the various types of "third variables" that are associated with causal pathways (McClendon, 1994). A simple causal pathway may predict that better access to health care (*independent variable*) causes better physical health (*dependent variable*). An individual's residential location may act as an *antecedent* variable, or a variable that precedes and affects the independent variable and thus the overall causal process. For example, an individual living in an urban area would be more likely to have better access to hospitals and better medical care. Therefore, residential location might be associated with an individual's access to medical facilities (via hospitals) and thus subsequently an individual's physical health (see Figure 1, A). In this case, it would be important to control for the effects of residential location when considering an individual's access to health care and physical health.

What if informal social support in the form of social interaction makes individuals feel happier and thus have better health? Happiness, or better mental health, would be an example of an *intervening* or *mediating* variable (see Figure 1, B). More informal social support (independent variable) leads to happiness (mediating variable), which in turn leads to improved physical health (dependent variable). Another "third variable" in the causal process is the *moderating* variable, or a variable that interacts with the independent variable to produce varying outcomes. For example, gender likely moderates the impact of social support on health (see Figure 1, C). Although social support (independent) still continues to have an impact on health (dependent variable), the exact nature of this effect differs for men and women (moderating variable). For example, women tend to socialize more with family and friends and have more diverse social networks than men do (Moore, 1990). Social interaction may have greater health benefits for women than for men. Culture/ethnicity, age, and a variety of other variables also moderate the impact of social support on health.

Third variables that are unrelated to the causal process one is studying yet are correlated with the independent and dependent variable are called *extraneous* variables. To follow from the previous example, one might study the relationship between social support and

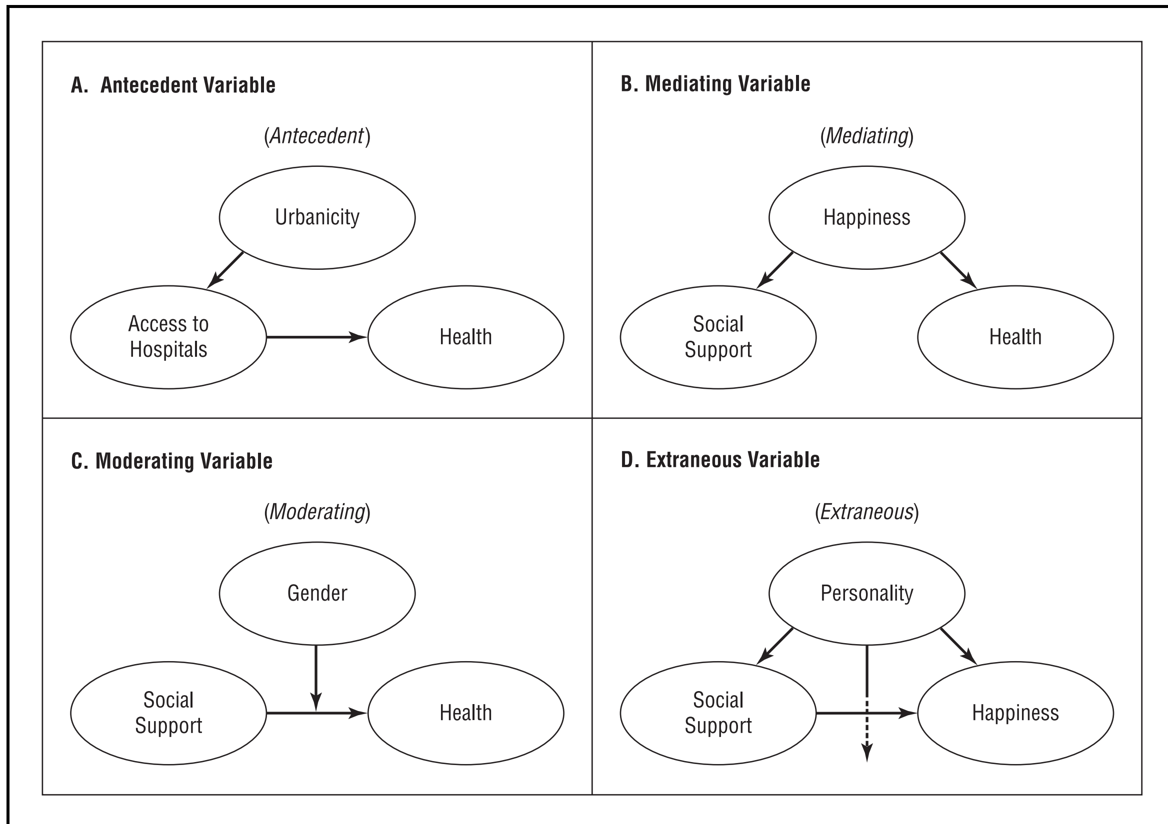


***Figure 1.*** *Causal pathways and "third variables."* CENGAGE LEARNING, GALE.

happiness. Although there may be a relationship between social support and happiness, there could be a third variable that is affecting both the independent and dependent variable in a way that decreases or eliminates the relationship between them. For example, personality may affect how an individual acts and also how that individual feels. A more outgoing personality could cause an individual to engage in more social interactions. An optimistic personality could cause a higher level of happiness. Taking into account an individual's personality may decrease the strength of the original relationship between social support and happiness or even eliminate it altogether. In this case, personality is an extraneous variable (see Figure 1, D). After one takes into account the individual's personality, the correlation between social support and happiness might decrease or disappear entirely. An extraneous variable is the most serious threat to causality and must be taken into account in developing a causal model.

## THEORIES AND HYPOTHESES: CORRELATIONAL VERSUS CAUSAL RELATIONSHIPS

To best anticipate possible causal pathways, researchers use theories and hypotheses. A *theory* is a general framework of propositions or a perspective about a social phenomenon that provides a basis for causal predictions. A *hypothesis* is a specific prediction about a social phenomenon often derived from a larger theoretical orientation/proposition and testable with research and analyses. Not all hypotheses are causal in nature. Because it can be very difficult to establish causality in the social sciences, many hypotheses predict only correlation. Researchers then offer a number of possible causal explanations when they interpret their data. The life course perspective, for example, does not necessarily generate causal hypotheses and thus is often classified by scholars as an orientation or framework, rather than a concrete theory (Heinz & Marshall, 2003). Within a life course framework, however, scholars propose a number of specific theoretical causal pathways to predict both correlation and causation such as childhood development theory, activity theory, theory of reciprocity, and age stratification theory (see Elder, 1998).

Drawing from societal norms regarding women and minorities as caregivers, a researcher might hypothesize a correlation between gender (women), race/ethnicity (minorities), and care for aging parents that contributes to the accumulation of disadvantage over the life course for certain groups (Dannefer, 2003). This hypothesis is a simple

correlation prediction drawn from a feminist perspective and knowledge about societal expectations. By using a specific theory, however, a researcher is better able to construct a causal hypothesis. Drawing from the theory of reciprocity (the idea that individuals have an inclination and desire to maintain reciprocal relationships with friends and family in terms of giving and receiving support and assistance throughout their lives), a researcher could hypothesize that an adult child will feel increased obligation and desire to provide care for an elderly parent if he or she received a great amount of support (financial, emotional, etc.) from that parent while growing up (Hareven, 1994). In this case, a researcher would predict not only that childhood and adolescent family experiences will be correlated with adults' decisions to care for aging parents but also that those experiences earlier in the life course have *causal* influence on adult behavior. Researchers should use theory to clarify whether their hypotheses predict correlation or causation and also to interpret their results in terms of causal (or noncausal) pathways.

## CORRELATION AND CAUSATION: METHODOLOGICAL DISTINCTIONS

Once researchers hypothesize causal pathways, they must collect data in specific ways to test their predictions. Social science researchers use three main types of methodology to collect data: ethnography, surveys, and experiments. Each of these three methodological approaches gathers data in a specific manner to help increase knowledge of the causal process. *Ethnography* is a form of social research that focuses on rich, detailed descriptions of social phenomena (Babbie, 2001). Typically, the primary goal of ethnographies is not to provide an empirical test of a causal hypothesis but rather to explore the intricate ways in which a variety of social and situational factors contribute to an individual's experience or concept of that experience. An ethnographer determines causality by first evaluating the credibility or ''believability'' of an explanation and then eliminating alternative explanations (Babbie, 2001). For example, an ethnographic account may investigate the ways in which older individuals formulate their expectations about aging as well as their identities in later life (Furstenberg, 2002). By understanding the process of idea formation, ethnographers gain insight into the many complex variables that contribute to a particular outcome.

*Surveys* collect less in-depth detail than ethnographies but typically yield a wider variety of information. A broader information base allows survey researchers to investigate a wider array of theorized outcomes. Surveys use telephone, mail, Internet, and/or face-to-face interviews to reach a larger number of people. Two main types of surveys, cross-sectional and longitudinal, provide varying amounts of data for life course research and causality. *Cross-sectional surveys* collect data at only one point in time, so they are not suitable for establishing a clear case for causation. Using cross-sectional survey results to look at causal relationships is like looking at a still photograph of a race car to determine the speed of the car (Babbie, 2001, p. 101). Cross-sectional methods are not able to disentangle the complicated effects of one's age, one's historical period, and/or one's cohort on an outcome variable (Alwin, 2002; Glenn, 1976). Thus, while one can examine information about 12th graders in the year 2008, one cannot compare them to other generations of 12th graders, to other age groups, or to themselves at different ages across the life course using cross-sectional surveys. *Longitudinal surveys*, however, yield data that are better suited for establishing causation because they collect data over many points in time. By examining change over time, researchers are able to determine that one event preceded another temporally and can also rule out spurious relationships (Babbie, 2001). Longitudinal surveys also allow researchers to disentangle the effects of age, period, and cohort in life course research (Glenn, 1976).

*Experiments* provide one of the best methods for determining a causal relationship. Using a controlled or natural environment, an experiment applies a stimulus (or observes individuals in a situation) and then directly observes the outcome. Researchers can place stricter controls on an experiment in order to identify cause and effect more specifically and accurately (Babbie, 2001). While they are excellent for establishing causation, controlled experiments are often less realistic and less likely to be indicative of actual life course experiences. An experiment about the mental stress of newly married couples, for example, cannot take into account every aspect of the couples' history or the myriad of other stressful events that may be going on in their life outside of the breadth of the study. Overall, however, whether in a controlled or natural environment, experiments are a strong method for establishing causation. Experiments and longitudinal surveys are two of the best ways to test causation, while ethnographies and cross-sectional surveys provide important contextual detail.

## CONCLUSION

Studies of the life course and human development involve extensive webs of interconnections among individuals and within the social world. The process of disentangling causal pathways from mere correlations can seem like a daunting task. Using tools of social research, however, such as characteristics of causation, theory and hypotheses, and careful methodology, researchers can begin to investigate the social world through a more specific lens. Although a great deal of social research

builds upon correlations between variables, life course and human development research provides a unique stage for investigating intricate causal processes. By focusing explicitly on the differences between correlation and causation, researchers will be better able to specify and interpret their models and thus gain a greater understanding of the human social world.

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## III. VARIABLES

The term *variables* broadly refers to measurable characteristics that can vary across time, individuals, groups, and institutions. Babbie (2001) defines a variable as a grouping of attributes or a set of mutually exclusive attributes. In conducting research, we attempt to determine the distribution of attributes across a population. For example, a society is considered *old* if between 8–10% of its population is 65 years or older. The United States consists of 12.6% elderly people in 2000, and thus, is defined as an old society (Gavrilov & Heuveline, 2002). *Operationalization* links variables with concepts and is the process by which researchers define and quantify the variability of a characteristic (or concept) to study social behaviors systematically. This encyclopedia entry briefly outlines the definition of variables, their common usage, and their importance for studying life course processes.

### LEVEL OF MEASUREMENT

*Good* measurement of a variable is characterized by the following: (a) inclusiveness or exhaustiveness, that is, all possible responses or states must be represented by a category; (b) mutual exclusiveness, that is, no response or state should be able to be placed in more than one category; and (c) precision, that is, more, rather than fewer categories should be defined when feasible. For example, for the variable *gender,* all individuals can be categorized into males and females (i.e., inclusiveness). The categories are also mutually exclusive because a person only can be placed into one category. Finally, taken together, the classification of males and females precisely defines gender.

Variables are categorized into four distinct types of measurement that include nominal, categorical, interval, and ratio variables and provide researchers with different levels of information (Stevens, 1946). *Nominal variables* are basic representations of data that denote specific characteristics of observations without quantifying or ranking the amount of difference between the categories. Nominal variables may include gender (male and female), race (White, Black, other), and marital status (single, married, divorced, widowed). *Ordinal variables* are a second class of variables that rank and order observational units. For example, a person's level of life satisfaction can be ranked according to her or his subjective assessments of being very satisfied, satisfied, unsatisfied, or very unsatisfied. Although more information is provided by ordinal variables compared with results using nominal variables, the degree of difference between the ordered levels cannot be determined. Nominal and ordinal variables are both considered to be categorical variables and are essential in studying discrete changes over an individual's life course.

A third type of measurement is termed *interval level.* A variable measured at the interval level provides information on the distance between the rankings of distinct categories. Interval variables are valuable because they allow researchers to quantify changes in the variable at different levels (values) of the variable accurately. For instance, in terms of income, the difference between ten and twenty thousand dollars is considered the same as the difference between $20,000 and $30,000 (i.e., $10,000).

Finally, ratio variables are similar to interval variables except that the former has a meaningful zero point (e.g., weight). Interval and ratio variables are considered continuous variables and capture important changes in the levels of individual growth and human development across age.

## RELATIONSHIPS BETWEEN VARIABLES

In addition to categorizing variables according to the level of measurement, variables also can be distinguishable based on how they relate to one another. In particular, an important goal of conducting research is to establish causal relationships between variables and allow researchers to draw inferences based on data. The key variable to be explained in an empirical study is called the dependent variable—sometimes referred to as an outcome—whereas independent variables are those thought to best explain variations in the dependent variable. In simple terms, independent and dependent variables operationalize what scientists refer to as cause and effect, respectively. As a substantive example, life course researchers have long been interested in understanding how the age of first marriage (independent variable) affects marital stability (dependent variable). Causal order is clear in this case because marital stability does not affect age at first marriage, but such relationships are not always as straightforward in the social science research. However, life course studies have played a critical role in conceptualizing and establishing the casual link between variables that can develop over extended periods of time.

Life course studies have highlighted the importance of mediating (intervening) and moderating variables—those that influence the association between an independent and dependent variables—which provide greater understanding of how and why a social relationship may exist. *Mediating variables* explain how and/or why these relationships occur whereas *moderating variables* affect the strength and/or direction of these relationships. For example, researchers want to learn the relationship between women's employment status and children's intellectual development. Socioeconomic status (SES) can be a mediating factor because SES explains how women's employment can affect children's intellectual development. After controlling for SES, the effect of women's employment on children's intellectual outcome may be reduced. Age can be a moderating factor because the effects of women's employment status on children's intellectual outcomes can be different for younger and older women. For a greater perspective of the life course and human development, the impact and interpretation of individual life experiences change across time, location, and other macrocontexts. Therefore, incorporating mediating and moderating variables helps scholars to understand fully the complex associations between dependent and independent variables.

All types of variables can be collected from both cross-sectional and longitudinal data. Although cross-sectional data are widely available and provide useful measurements of observational units, they are limited to collecting information from subjects at only a single time point and thus researchers cannot ascertain causal direction. In addition, variables from cross-sectional data are less suitable for life course research because they do not capture change in observations from multiple time points. In contrast, life course scholars often rely on longitudinal data to study stability and change among variables related to long-term processes of human development. We will provide examples and demonstrate how different types of variables are used in life course research.

## DYNAMIC VARIABLES IN LIFE COURSE RESEARCH

The theoretical and conceptual progress in life course research has benefited greatly from advancement in how variables are operationalized in research. Variables in a life course perspective can be categorized into the following interrelated groups: (a) as discrete events; (b) as continuous processes; and (c) in a social context. Broadly, life course research recognizes the importance of the timing, sequence, and durations of an individual's life transitions and social roles in the domains of education, family, work, and residence (Elder, 1992). The following section outlines how life course variables are conceptualized and measured to capture the events and experiences of human development.

**Life Course as Discrete Events** Studies of human growth and development demonstrate how the life course is marked by discrete events that shape individuals' social roles, behaviors, and life experiences. As people age, they enter and exit various life stages and roles—called *transitions*— that both define an individual's unique character and represents a shared life cycle that unfolds from childhood to adulthood. Although many life events are common and normative experiences, life transitions can become defining variables in an individual's life course. Transitions such as becoming employed, married, having children, retiring, and becoming widowed are just some examples of categorical variables that have generated enormous amounts of new research and provided a greater understanding of discrete life-changes.

The strength of the life course approach for studying role and status transitions is demonstrated in the literature on becoming a caregiver. Most research concurs that caregiving during adulthood is an important life course

transition that involves significant change in family roles, obligations, and time allocation. By using information from longitudinal data, life course scholars show that transitioning into a caregiving role, transitioning out, or remaining a caregiver across survey intervals are distinct variables that may have broad implications for ones' well-being (e.g., Marks, Lambert, & Choi, 2002). For instance, knowing whether an individual recently became a caregiver to his or her spouse or ended this care after the institutionalization or death of a parent offers valuable information on the effects of a discrete role transition beyond the knowledge of an individual's current status.

Likewise, consider the ways marital status is often measured in the literature. Conventional studies typically ascertain marital status by asking survey respondents whether they are currently single, married, divorced, or widowed. In comparison, life course researchers focus on marital status at more than one time point to develop categorical variables that incorporate the continuity and change in status (i.e., transitions) over time. In doing so, scholars can disaggregate multiple trajectories—in this case marital transitions—to identify persons who become married, divorced, widowed, or remarried (Williams & Umberson, 2004). From an empirical standpoint, however, disaggregating trajectories (regardless of the transitions) often require extensive data that are collected from multiple surveys over an extended period, which is usually expensive and time consuming. Life history calendars are also useful for collecting information on life transitions.

**Life Course as Continuous Processes** Measuring life course experiences as discrete events is informative but not fully representative of human development. Therefore, one must also consider variables that measure life course concepts as continuous processes of stability and change. As such, continuous variables are typically used to maximize the level or quantity of change that characterize a person's life beyond his or her past, present, or future status. Just as transitions to parenthood or retirement are critical turning points marked by role adjustments, the timing, duration, and sequence of such events can be crucial in defining the success or failure of an individual's path in life. Accordingly, measuring the accumulation of the age, length, and ordering of role occupancies has proven to be fertile territory for studies implementing life course variables for advancing our understanding of immediate and long-term causal relationships.

To revisit the example of marital status, recent life course research shows that the timing and duration of marital status(es) can have equal or greater explanatory power than simply the transition(s) from one marital status to another. In an innovative study focusing on the culmination of marital experiences, researchers demonstrated that the theoretical concept of a marital trajectory could be bridged with its measurement (Dupre & Meadows, 2007). Using longitudinal data and variables, those authors showed that the age of marriage (timing) and lengths of marriage and divorce (durations) in marital status(es) exert varying degrees of support or harm to one's health. For example, women who marry early or divorce are more likely to experience chronic disease, yet prolonged periods of divorce for women become less consequential to their health. For men, the timing of marriage is much less significant compared with the protective effects of an extended marriage (duration).

Variables quantifying the life course as a continuous process also are reflected in the culmination of an individual's current life status. Again, health is an accurate example of such an accumulation of life events and experiences. Despite the somewhat widespread emphasis on the biological determinants predicting health and longevity, social scientists highlight strong evidence that links the interaction between an individual's genetic makeup and the person's social environment. For example, many studies show that early experiences, including family origin, education, employment, and lifestyle, are significantly associated with health outcomes at old ages. Cumulative disadvantage theory shows that individual differences arising from economic standing, exposure to health risks, and other factors that accumulate from early ages increase over the life course to produce widening inequalities (Dannefer, 2003).

In conclusion, the innovation and use of life course variables in the literature continues to shed new light on how individuals age in a social environment. Both categorical and continuous variables will remain the foundation for constructing individual and contextual measures of complex relationships derived from ever-evolving life course concepts. However, the development of dynamic variables also requires advanced methods to analyze life course processes.

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# *Annotated Bibliography*

*Compiled by Deborah Carr*

This annotated bibliography focuses on scholarly studies that have had a powerful influence on the development of life course theory, or on important empirical studies of life course and human development. This small selection is not exhaustive, yet these books and one documentary film offer scholars a glimpse into the foundations of and recent applications of the life course paradigm.

## VOLUME 1, CHILDHOOD AND ADOLESCENCE

Aries, P. (1962). *Centuries of childhood: A social history of family life.* New York: Vintage Books.

A path breaking study of elite families in France from the 16th to 19th centuries. This study generated the theory of "parental investment." Aries argued that both the financial and emotional costs of childrearing rose during this time period. Greater emotional involvement led to parent's heightened investments in infant survival. As a result, infant mortality rates declined, child survival rates rose, and privileged families were forced to adopt fertility control in order to avoid the production of too many "costly" children. These ideas have important implications for understanding social class differences in parenting style, fertility, and family relations.

Bronfenbrenner, U. (1979). *Ecology of human development: Experiments by design and nature.* Cambridge, MA: Harvard University.

In this classic treatise on human development, Erikson delineated four types of nested systems that shape human lives:*microsystem* (such as the family or classroom); *mesosytem* (two microsystems in interaction, such as work-family conflict); *exosystem* (external environments which indirectly influence development, such as the influence of parent's workplace on child well-being); and *macrosystem* (the larger socio-cultural context). Bronfenbrenner's "bioecological" approach to human development broke down barriers among the social sciences, and built bridges between the disciplines.

Clausen, J. (1993). *American lives: Looking back at the children of the Great Depression.* New York: Free Press.

This study explores the early life factors that set the stage for happy, successful adult lives. Clausen traces the life histories of participants in the Berkeley Longitudinal Studies over a 60-year span,from childhood into old age.Drawing on survey data and in-depth interviews, he argues that adolescents who exhibit "planful competence" go on to experience the most successful work and family lives. Planful competence comprises self-confidence, dependability, and intellectual investment. The study reveals the important ways that both agency and structure shape the adult life course.

Coleman, J. S. (1961). *Adolescent society: The social life of teenagers and its impact on education.* New York: Free Press.

Writing about high schools in the latter half of the 1950s, Coleman showed how the organization of school life reinforces teenage "anti-learning" norms. Ten high schools in northern Illinois were selected from communities which represented a range of sizes and social class backgrounds. This classic study was among the first to show that children and adolescents maintain social worlds that are distinct from their parents'—with their own distinctive norms, values, and practices.

Erickson, E. H. (1950). *Childhood and society.* New York: W. W. Norton.

In this highly influential work, Erikson articulates his theory of psychosocial development and proposes that well-adjusted adults must pass through eight developmental stages from infancy to late adulthood. In each stage the person confronts, and, ideally, masters new challenges. Each stage builds on the successful completion of prior stages. Each challenge that is not successfully resolved is expected to reappear as a problem in the future.Erikson offered an influential theory as to why individuals who had been thwarted in the healthy resolution of early phases (such as establishing healthy levels of trust and autonomy in toddlerhood) had such difficulty with the crises that came in adulthood.

Furstenberg, F. F., Brooks-Gunn, J., & Morgan, S. P. (1987). *Adolescent mothers in later life.* New York: Cambridge University Press.

This landmark study traces the life histories of approximately 300 teenage mothers and their children over a 17-year period. Drawing on interview data and case studies, the authors provide a vivid account of the impact of early childbearing on young mothers and their children. The data reveal that the detrimental effects of early childbearing largely reflect the poor resources the women had prior to giving birth.However, the children of single mothers often revealed very bleak prospects, due largely to the single mothers' material disadvantage in adulthood. The study also highlights the remarkable heterogeneity of both mothers' and children's life course, with many showing unexpected resilience.

MacLeod, J. (1995). *Ain't no makin' it: Aspirations and attainment in a low-income neighborhood* (Expanded Edition). New York: Westview.

In this modern classic, MacLeod chronicles the experiences of two groups of teenage boys in a low-income housing project: the Hallway Hangers, a group of mainly White boys, and the Brothers, a group of mostly Black boys. Through observations and in-depth interviews, MacLeod finds that the Brothers had higher educational and occupational aspirations than did the Hangers. His sociological explanation is that the black teens can attribute obstacles to racism, which inspires them to work harder, while the white teens viewed their futures as bleak and immutable. This study shows how race, class, gender, and sociohistorical context shape one's real and perceived opportunities.

## VOLUME 2, ADULTHOOD

Apted, M. (1997). *The up series.* London: First Run Features.

This film documentary series follows the lives of 12 men and women in the United Kingdom who were first interviewed when they were age 7, in the 1964 film *7 Up*. Apted re-interviews the young people every seven years, and presents their experiences in the follow-up films *14 Up*, *21 Up*, *28 Up*, *35 Up*, *42 Up*, and most recently *49 Up*. The young people came from diverse social class backgrounds, and grew up under a period of rapid social and economic change. The film series is a fascinating glimpse into the ways that race, gender, social class, opportunities, constraints, and personality shape—but do not determine—one's life course. Viewers will be surprised to witness the ups and downs in the young people's lives.

Easterlin, R. (1987). *Birth and fortune: The impact of numbers on personal welfare*. Chicago: University of Chicago.

This controversial demographic study proposes an innovative explanation for the low birth rates during the Depression era, high birth rates during the Baby Boom years of the 1950s, and low birth rates during the Baby Bust years of the 1970s. Easterlin argues that cohort size, or the number of persons born in one's birth year, affect life choices—particularly childbearing—because large cohorts experience difficult competition in their work and schooling experiences. Cohort size also affects one's relative income, or the standard of living that one enjoys in adulthood, relative to the standards they enjoyed in childhood.This study shaped the way that social scientists understand generational differences in adult lives.

Elder, G. H. (1999). *Children of the Great Depression* (25th anniversary). Boulder, CO: Westview Press.

Originally published in 1974, this classic study of the life course presented the first longitudinal study of a Depression cohort. The 25th anniversary edition of the much acclaimed work includes a new chapter which documents how World War II and the Korean War changed the lives of California youth who were born in 1920–1921 and members of a younger birth cohort (1928–1929). The book also reviews the project's contributions to theory and method in the study of lives. The analyses are based on data from the Oakland Growth and Berkeley Guidance Studies of the Institute for Human Development at the University of California.

Hareven, T. (1982). *Family time and industrial time.* Cambridge: Cambridge University Press.

The myth that industrialization broke down traditional family ties is a commonly-held misperception among Americans. Hareven, a social historian, dispels this myth and illustrates how the family survived and became an active force in the modern factory. This book documents

how families adapted to changes in work and industry. Hareven reconstructs family and work patterns among immigrants as well as native textile laborers over two generations during a crucial period in the transformation of American industry from the late 19th century. This study reveals how macrosocial changes and individual-level experiences are closely intertwined.

Laub, J. H., & Sampson, R. J. (2006). *Shared beginnings, divergent lives: Delinquent boys to age 70.* Cambridge, MA: Harvard University Press.

This fascinating study reveals that a criminal past does not necessarily mean a criminal future. The authors analyze newly collected data on crime and social development up to age 70 for 500 men who were in reform school during the 1940s. Born in Boston in the late 1920s and early 1930s, these men were the subjects of the classic study *Unraveling Juvenile Delinquency* by Sheldon and Eleanor Glueck (1950). *Shared Beginnings* represents the longest longitudinal study of age, crime, and the life course to date. By blending life-history narratives and survey data, the authors offer new insights into life course trajectories of crime, and identify those factors that either reinforce or derail criminal careers.

McAdam, D. (1988). *Freedom summer*. New York: Oxford University Press.

This study of youth activism in the 1960s exemplifies the core themes of the "sociological imagination." In 1964, more than 1000 volunteers—mostly White, privileged, Northern college students—went to Mississippi to launch voter-registration drives. Within 10 days, three participants were murdered by local segregationists, and dozens more endured beatings and arrests. Drawing on questionnaires and interviews with hundreds of the volunteers, McAdam shows how both social background factors and historical context shaped student activism. Many volunteers continued to participate in the women's, anti-nuclear, environmental and other social movements through adulthood, revealing the far-reaching impact of early adult political socialization.

Mills, C. W. (2000). (orig. 1959). *The sociological imagination*. New York: Oxford University Press.

Considered one of the most influential books in sociology, this book sets forth Mills' thesis that human lives reflect the intersection of "biography" and "history." The "sociological imagination" is a way of observing human behavior that emphasizes the linkages between widespread "social" issues" and more personal "private issues." This seminal work provides the foundation for the life course paradigm, especially the notion that human lives are shaped by sociohistorical context.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community.* New York: Simon and Schuster.

This modern classic describes declines in "social capital" in the United States since 1950, and its implications for every-day-life. Citing data such as declining enrollments in community activities (like bowling leagues), civic organizations, and even voter turnout, Putnam argues that Americans' declining trust in social institutions, the rise of women's employment, and the pervasiveness of the Internet,have led to a fraying of social integration. Although critics have argued that social integration and engagement is as high as ever in the late 20th and early 21st century, Putnam clearly shows the importance of social integration and support for the well-being of Americans.

## VOLUME 3, LATER LIFE

Cowgill, D. O., & Holmes, L. D. (1972). *Aging and modernization*. New York: Appleton-Century-Crofts.

In this highly influential work, the authors argue that modernization leads to declines in status of the elderly. They cite historical evidence showing that in early societies, elderly persons were held in high esteem, yet in modern societies older persons are afforded much lower status. With technological advances, new skills are cherished, and the contributions of the elderly are devalued. This book has generated much research, and its key arguments continue to be debated today, when internet use and computer literacy are parts of daily life.

Cumming, E., & Henry, W. (1961). *Growing old: The process of disengagement.* NY: Basic Books.

This book articulated one of the most widely debated theories of aging: disengagement theory. This thesis, which draws on functionalist perspectives in sociology, holds that "normal" aging involves a gradual and inevitable "disengagement" from one's social roles. Older adults in poor health, the authors argue, should gradually pull away from their work and family roles and relationships; this disengagement will allow them to prepare for their own deaths. This disengagement also is beneficial to society, as it creates work opportunities for younger cohorts, and allows others to prepare for the deaths of loved ones. These ideas are widely refuted, given sweeping evidence that active engagement promotes health among the elderly. However, it provides an interesting perspective for understanding the way views of aging have shifted in recent decades.

Hochschild, A. (1978). *The unexpected community: Portrait of an old age subculture.* Berkeley, CA: University of California Press.

This qualitative study provides a nuanced and in-depth analysis of a retirement community in San Francisco, where the older adults live without loneliness or isolation. Hochschild identifies the distinctive strengths of this community of older adults, and suggests ways that this community provides a model for other older people. This book shows how older adults form their own subcultures and reveals that old age need not be a time of sadness, incapacitation and social isolation.

Lopata, H. Z. (1973). *Widowhood in an American city.* Cambridge, MA: Schenkman.

Considered one of the earliest and most comprehensive studies of late-life widowhood. Lopata conducted surveys and in-depth interviews with widowed women in Chicago, and documented several important findings that guide bereavement research today. She found that severe grief is not universal, nor is it experienced equally by all women—gender, social class, work and family roles, and the nature of one's marriage all conditioned the way women adjusted to the loss of their husbands, often after decades of marriage.

Neugarten, B. L., & Neugarten, D. A. (1996). *Meanings of age: Selected papers.* Chicago: University of Chicago.

Covering more than 40 years of scholarship, this volume brings together Bernice Neugarten's most important contributions in four areas: Age as a Dimension of Social Organization; The Life Course; Personality and Adaptation; and Social Policy Issues. Neugarten pioneered the study of age, the social clock, and social timing and is noted for changing negative stereotypes about aging through her studies of personality, aging, competencies of middle-aged and older people, and generational relations.

Riley, M. W., et al. (1968–1972). *Aging and society.* New York: Russell Sage.

This three volume series is a highly influential work on how chronological age and aging processes both affect and are affected by social and psychological processes. *Volume 1: An Inventory of Research Findings* (1968) provides a review and synopsis of empirical studies of aging and midlife. The vast majority of studies cited were conducted post-1960, revealing the remarkable increase in social gerontology research that flourished in the late 20th century. *Volume 2: Aging and the Practicing Professions* (1969) explored the effects of aging on professional workers. *Volume 3: Age Stratification* (1972), considered the most influential volume, sets forth the central tenets of age stratification theory. This theory proposes that age—like gender and race—is a source of stratification in society. Volume 3 set the stage for the development of the life course paradigm, including the key themes of "linked lives," the importance of transitions and trajectories, the influence of historical context on individual lives.

Rossi, A., & Rossi, P. (1990). *Of human bonding: Parent-child relations across the life course*. NY: Aldine de Gruyter.

The authors analyze data from a study of three generations of family members residing in the greater Boston area. They document important aspects of family relationships, including both the emotional nature of their social ties, but also actual and perceived obligations among family members. An important strength is that they explore the ways that gender shapes family relations, and they show that maternal grandmothers and granddaughters share a particularly close bond. This book clearly illustrates the importance of "linked lives" for one's life course experiences.

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